

CORRECTIONS

Chapter 2

- Page 10, Table 2.5, Source - Delete 'Changes'.  
Page 12, Table 2.9, Source - Delete '1916', substitute '1961'.  
Page 14, Table 2.10, Chatham - Delete '26,120', substitute '26,220'.  
Page 17, para. 2.39, line 22 - Insert 'previous' before 'location'.

Chapter 3

- Page 21, para. 3.10, footnote 2 - Bracket together Groups 1 and 3 (Senior Salariat); Groups 2, 4 and 5 (Middle Mass); Groups 6 and 7 (Less Privileged).

Chapter 4

- Page 30, para. 4.6, line 10 - Delete 'regions', substitute 'region'.  
Page 39, para. 4.39, line 5 - Delete semi-colon.

Chapter 7

- Page 53, para. 7.8, line 2 - Delete '(employment)'.

Chapter 8

- Page 61, Table 8.5, OSE Change 1981-91B - Delete '735', substitute '753'.  
Page 62, para. 8.30, line 4 - Insert 'as' between 'success' and 'a'.

Chapter 10

- Page 80, para. 10.5, first line - Insert after 'strategy', '(see figure 35)'.  
Page 83, para. 10.15, last line - Delete sentence, substitute 'The strategic railway framework, which is the main network outside London existing in 1968 since the team regarded this as fixed (see Chapter 6), is illustrated in Figure 34'.  
Page 85, para. 10.30, line 4 - Delete 'such', substitute 'planning'.

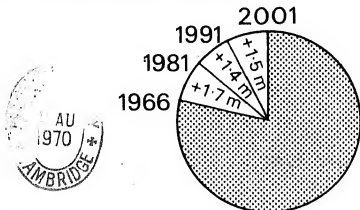
Appendix D

- Table 3 - Delete title, substitute 'Percentage Population Change'.

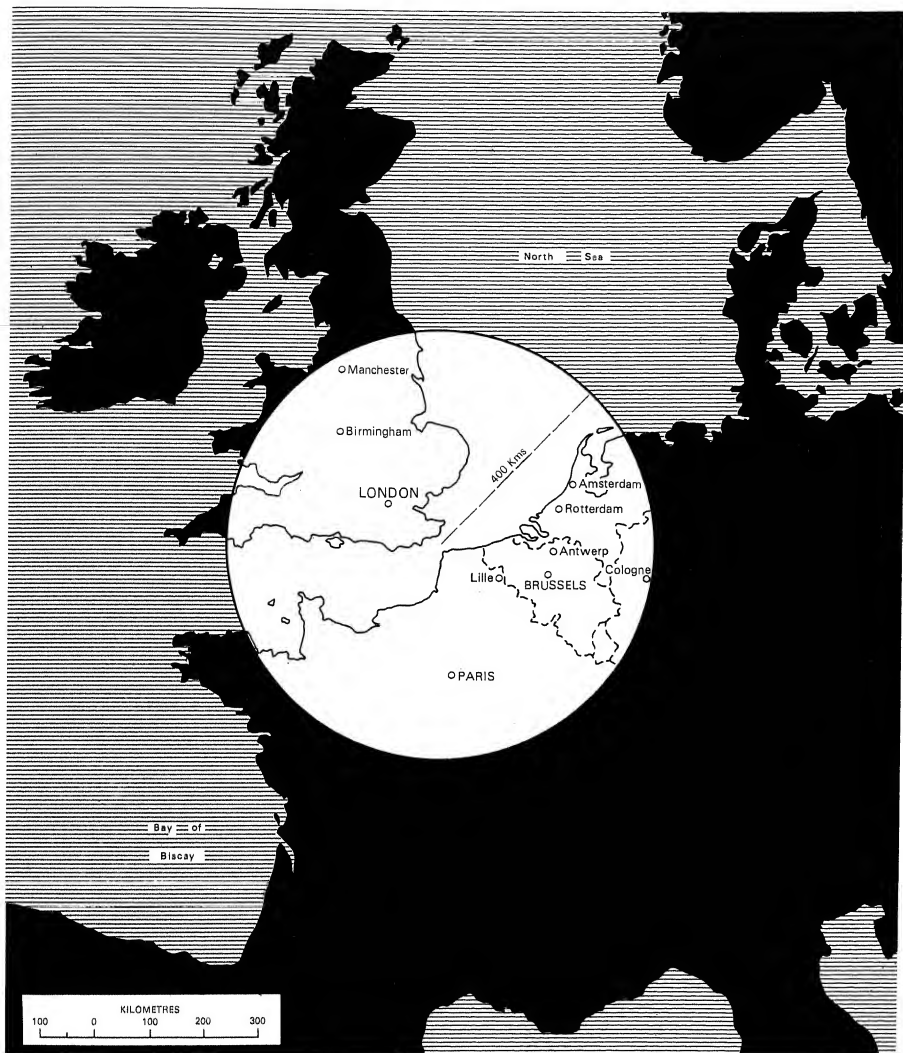
Appendix E

- Page 105, Planning Area 18, para. 2(b) - Delete 'keep', substitute 'help'.

Figures Figure 4 - Delete diagram, substitute



Stippled area represents 17 million population in region in 1966 and segments indicate design population totals at dates indicated.



**FIG 1 NORTH WEST EUROPE**

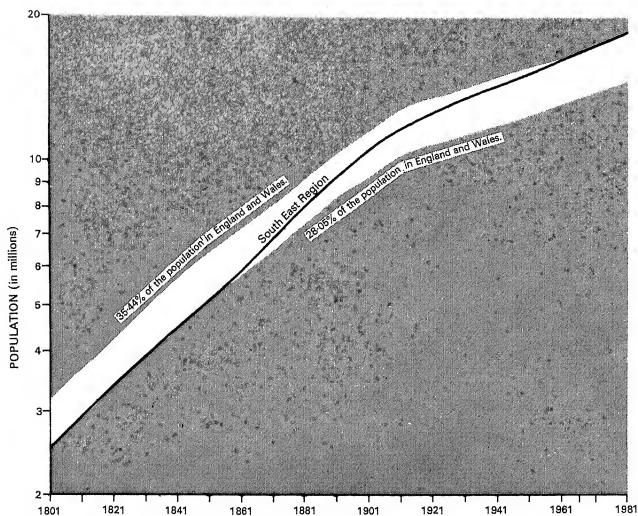


FIG 2 POPULATION OF ENGLAND AND WALES AND SOUTH EAST

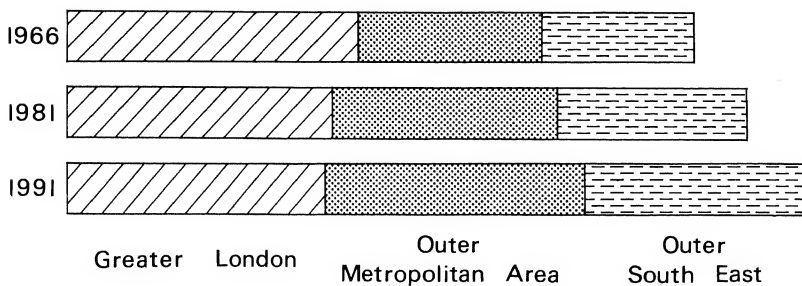


FIG 3 POPULATION BY MAJOR DIVISIONS

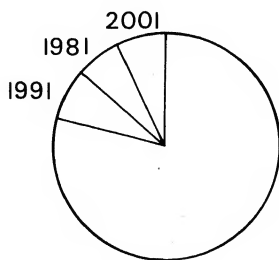


FIG 4 POPULATION DESIGN TOTALS

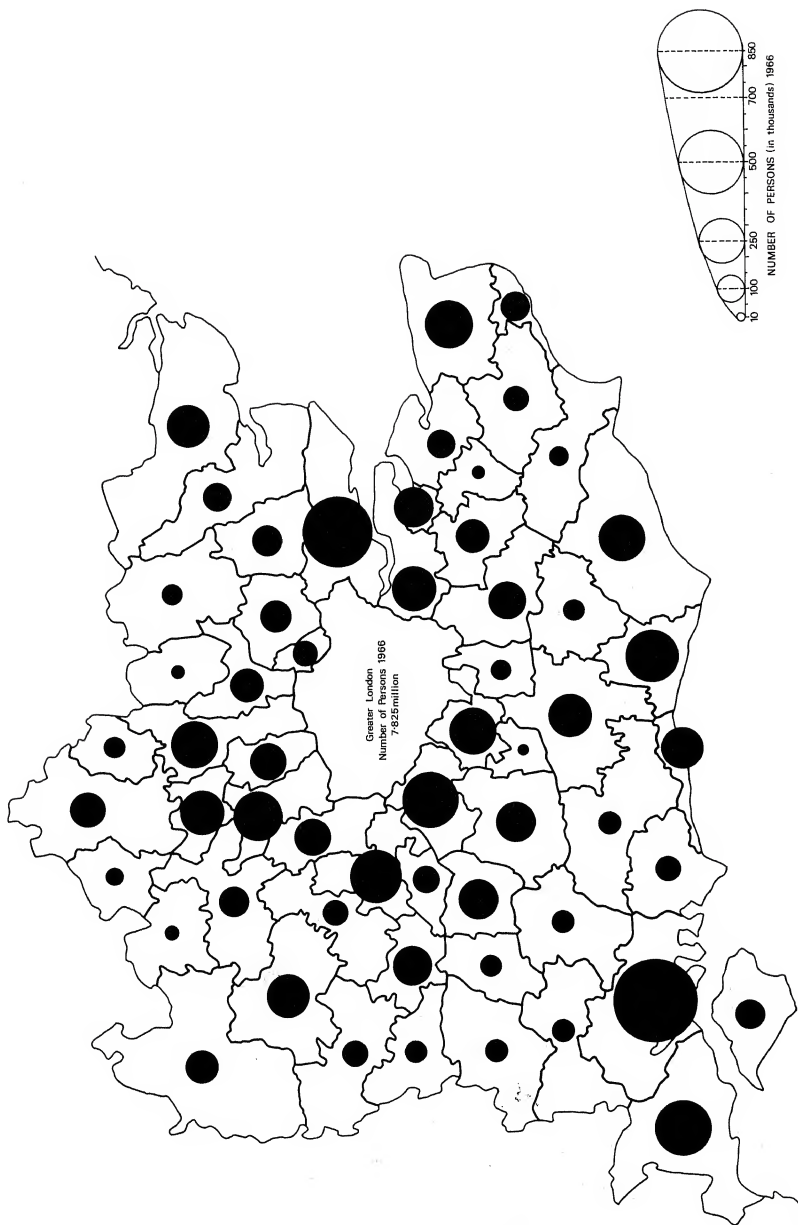
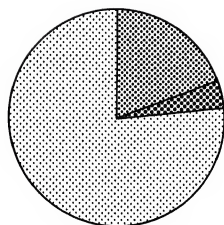
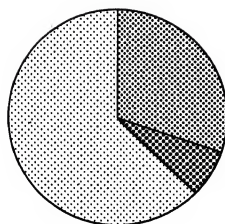


FIG 5 POPULATION 1966

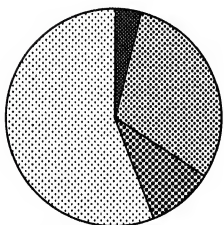




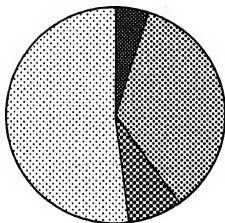
CENTRAL LONDON



GREATER LONDON



REST OF SOUTH EAST



ENGLAND AND WALES

Primary



Manufacturing



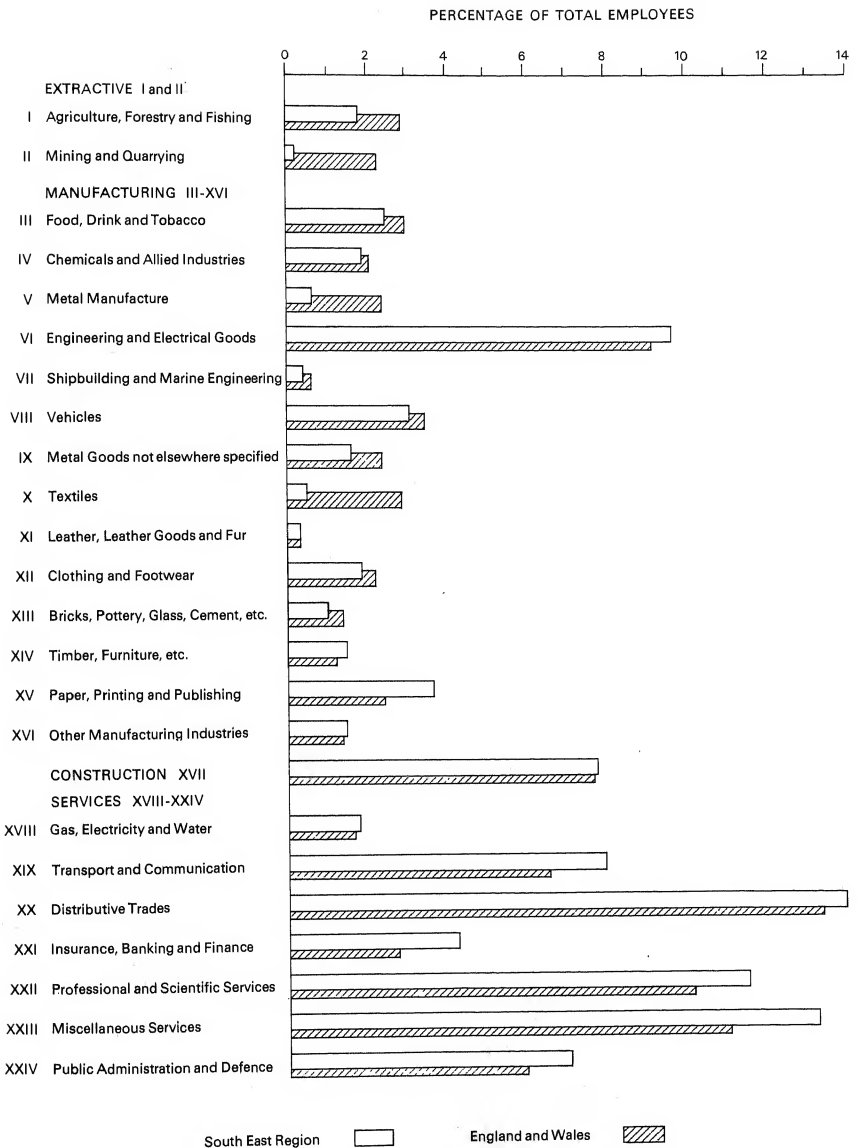
Construction



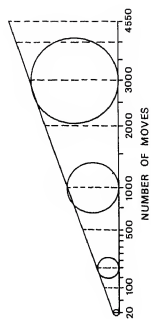
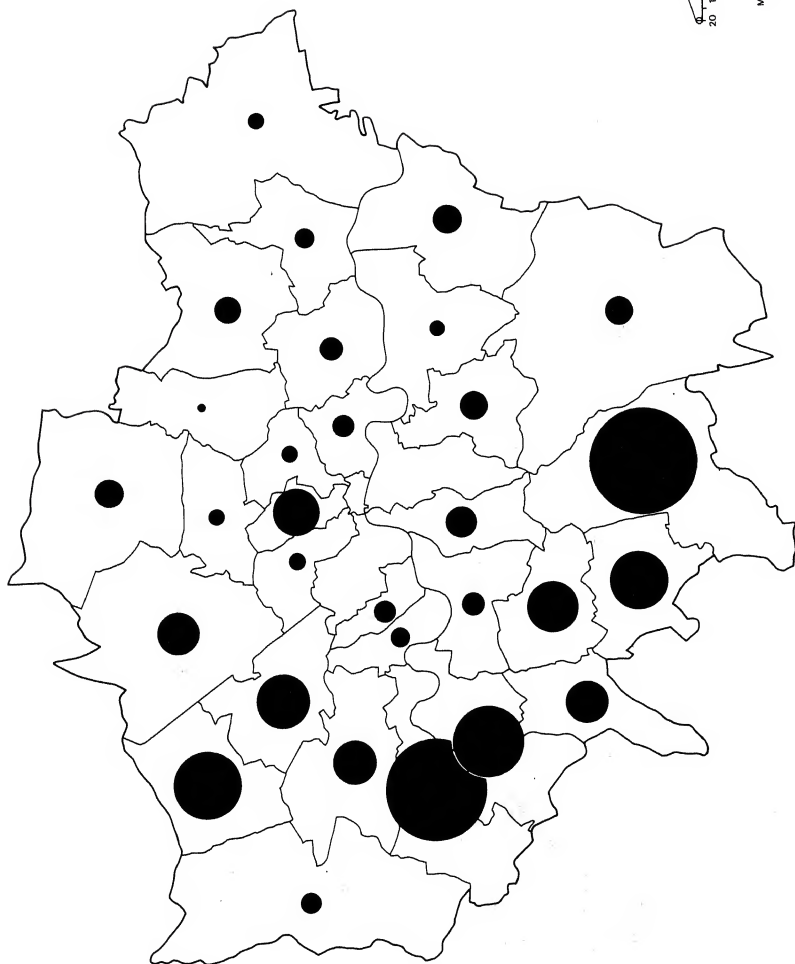
Services



**FIG 6 BROAD INDUSTRIAL STRUCTURE OF THE CENTRE COMPARED WITH OTHER AREAS 1966**



**FIG 7 EMPLOYMENT STRUCTURE BY 24 STANDARD INDUSTRIAL CLASSIFICATION ORDERS 1966. SOUTH EAST ENGLAND AND WALES**



Moves of 1-20 are shown by a symbol representing 20

FIG 8 DESTINATION OF OFFICE MOVES : GREATER LONDON

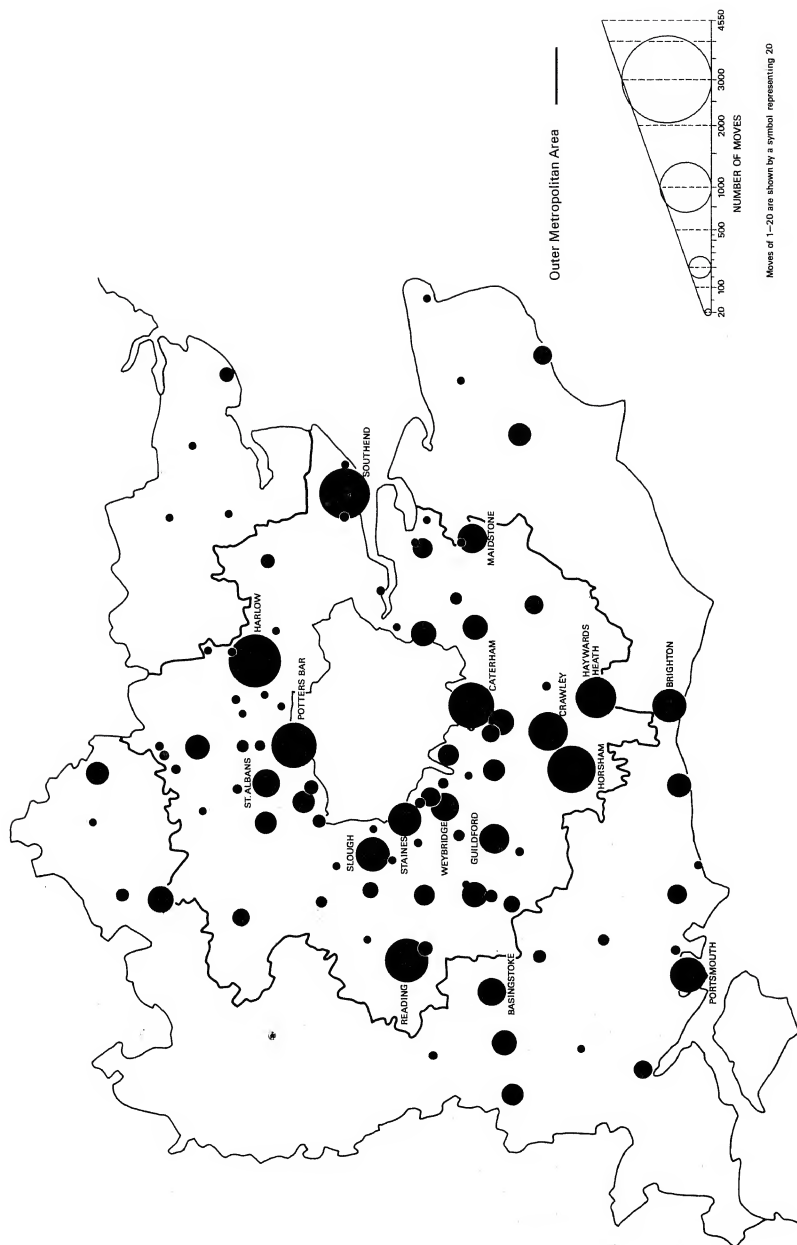


FIG 9 DESTINATION OF OFFICE MOVES IN THE SOUTH EAST EXCLUDING GREATER LONDON

Destination of moves from:

- ★ Central London
- ▲ Inner London
- Outer London
- Elsewhere in the region
- ♦ Outside the region

Solid symbols represent transfers, open symbols represent branch establishments

Establishments with less than 100 employees in 1968 are excluded

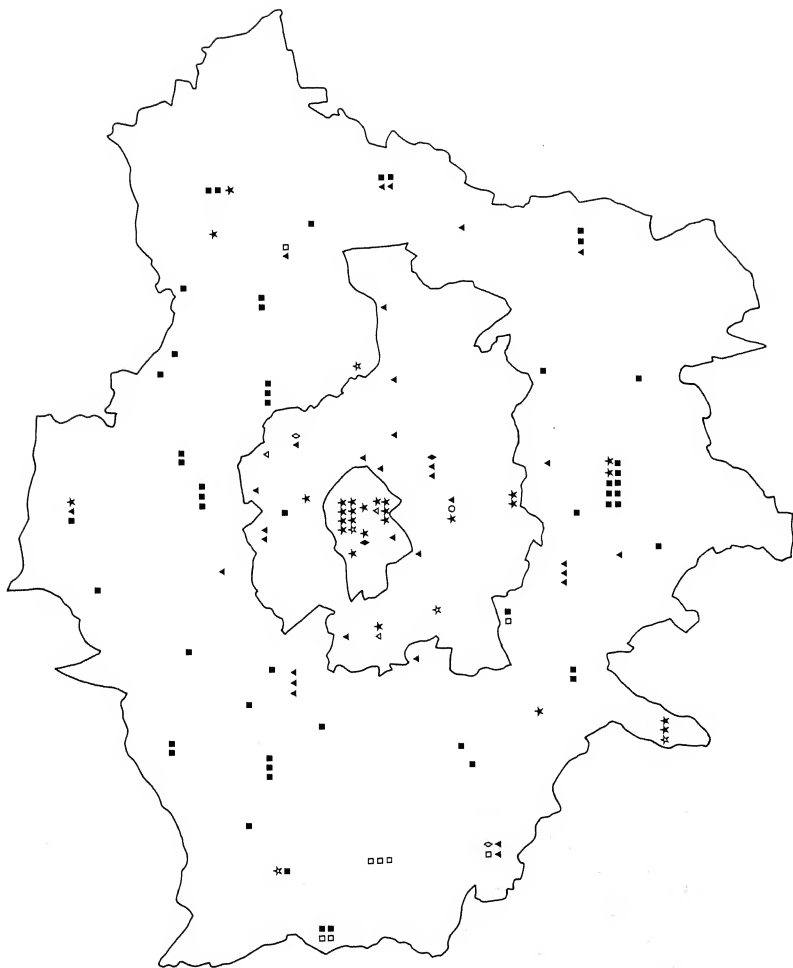


FIG 10 MOVEMENT OF INDUSTRY: GREATER LONDON

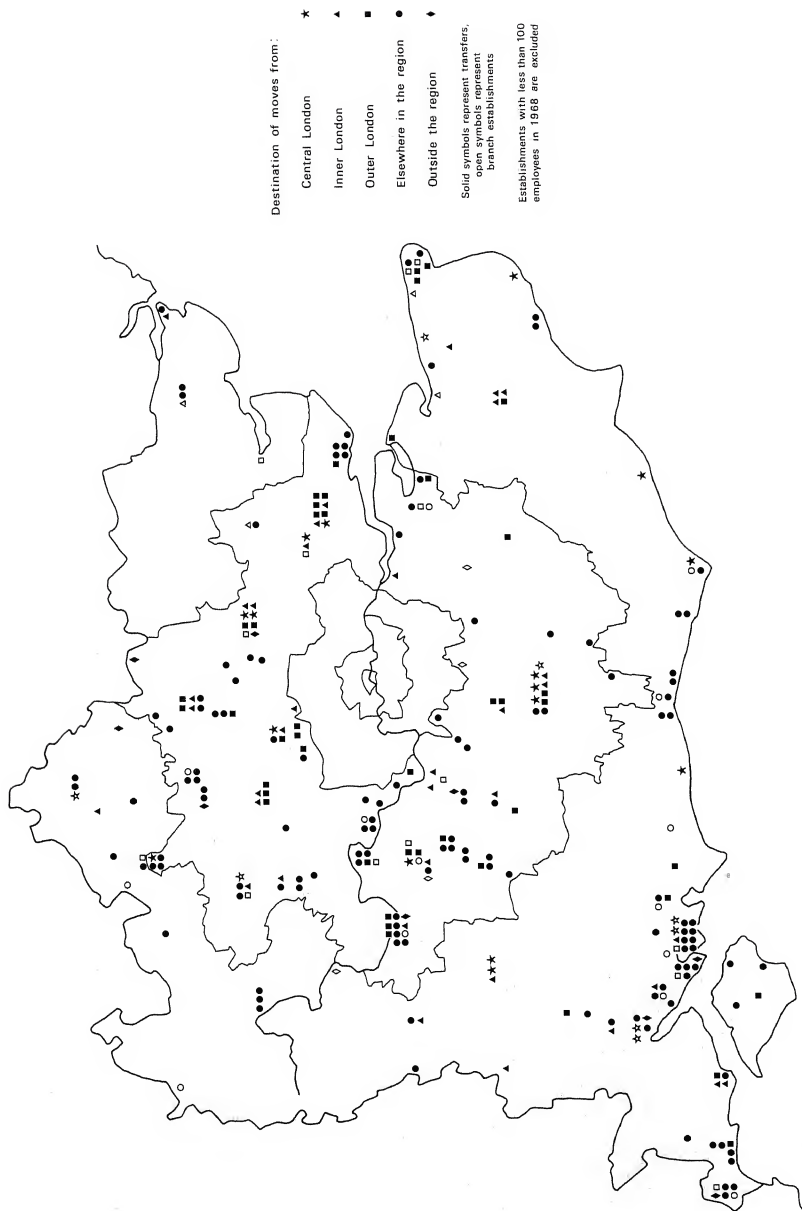
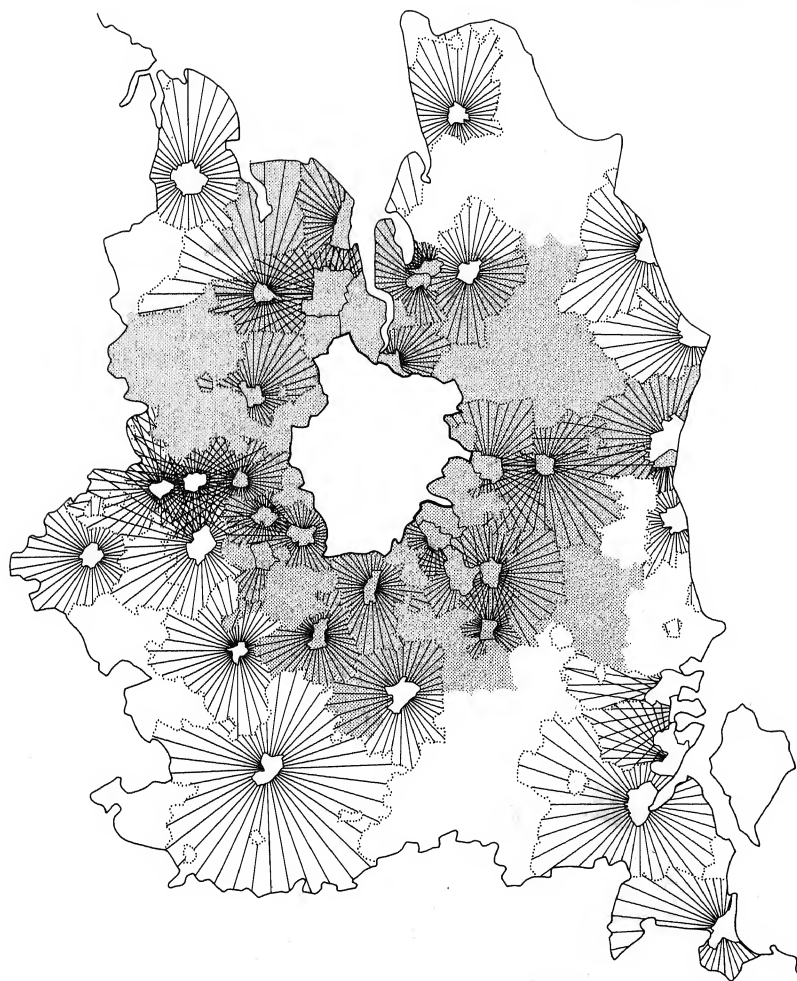


FIG 11 MOVEMENT OF INDUSTRY IN THE SOUTH EAST EXCLUDING GREATER LONDON



Area of over 51 economically active population dependent on centre of employment

Local Authorities with 51 and over economically active population dependent on Greater London

FIG 12 COMMUTING HINTERLANDS OF EMPLOYMENT CENTRES OUTSIDE GREATER LONDON



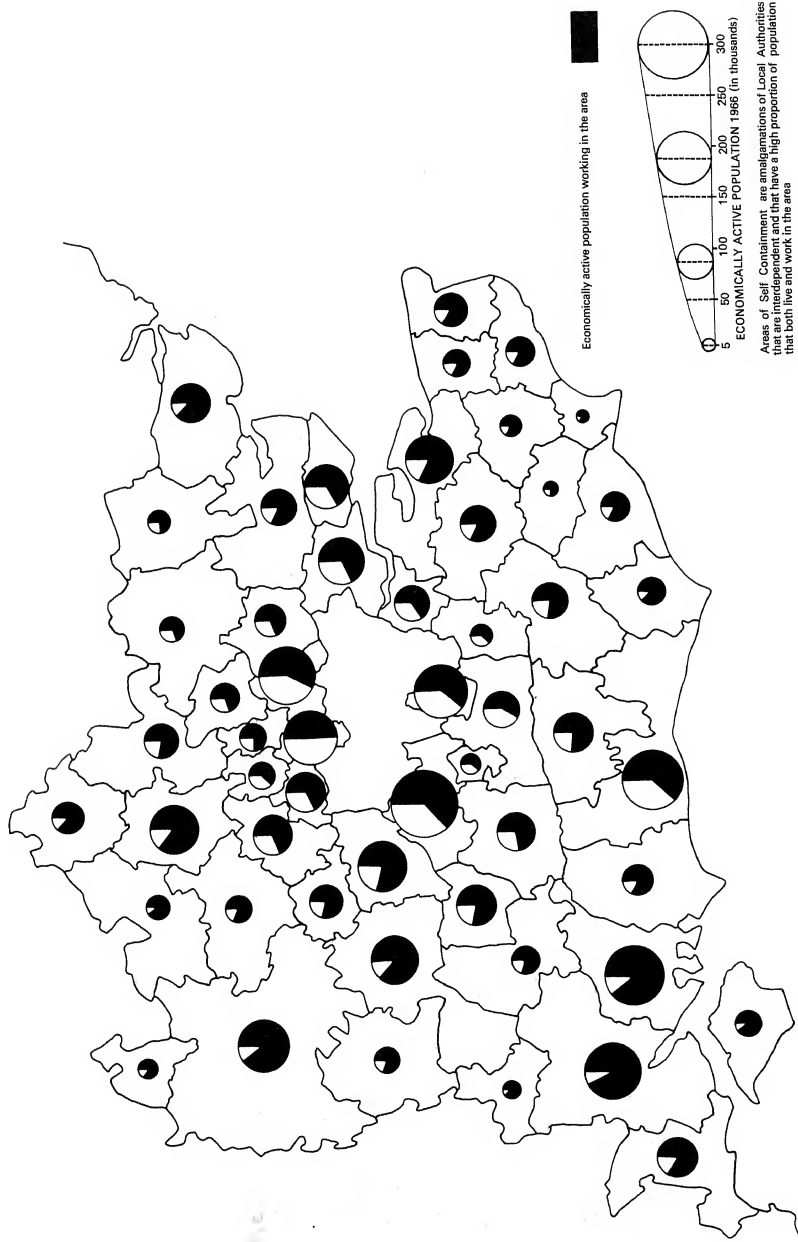


FIG 13 AREAS OF SELF-CONTAINMENT

# PERCENTAGE OF OCCUPIED LABOUR FORCE

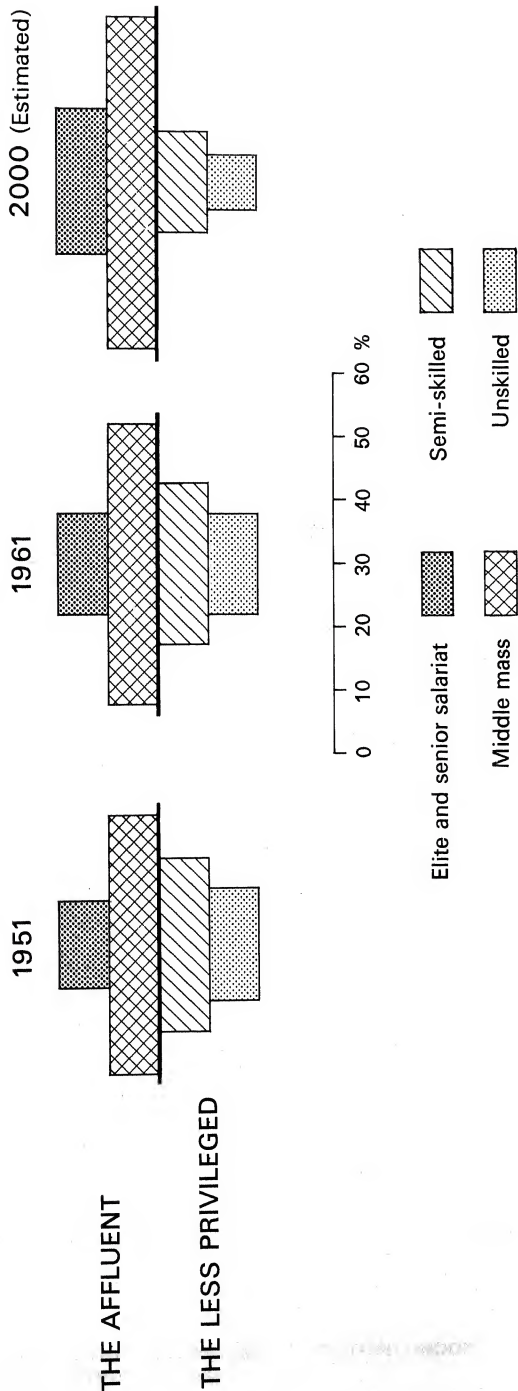
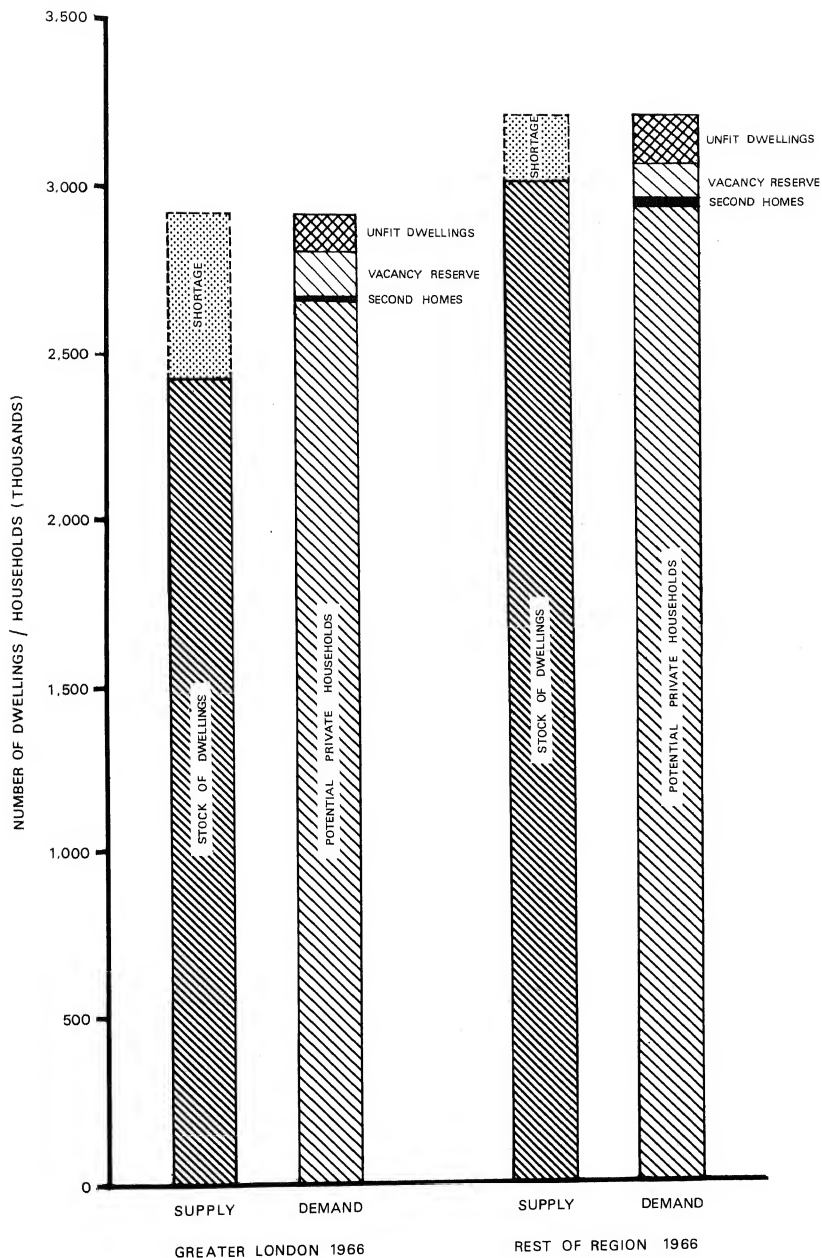
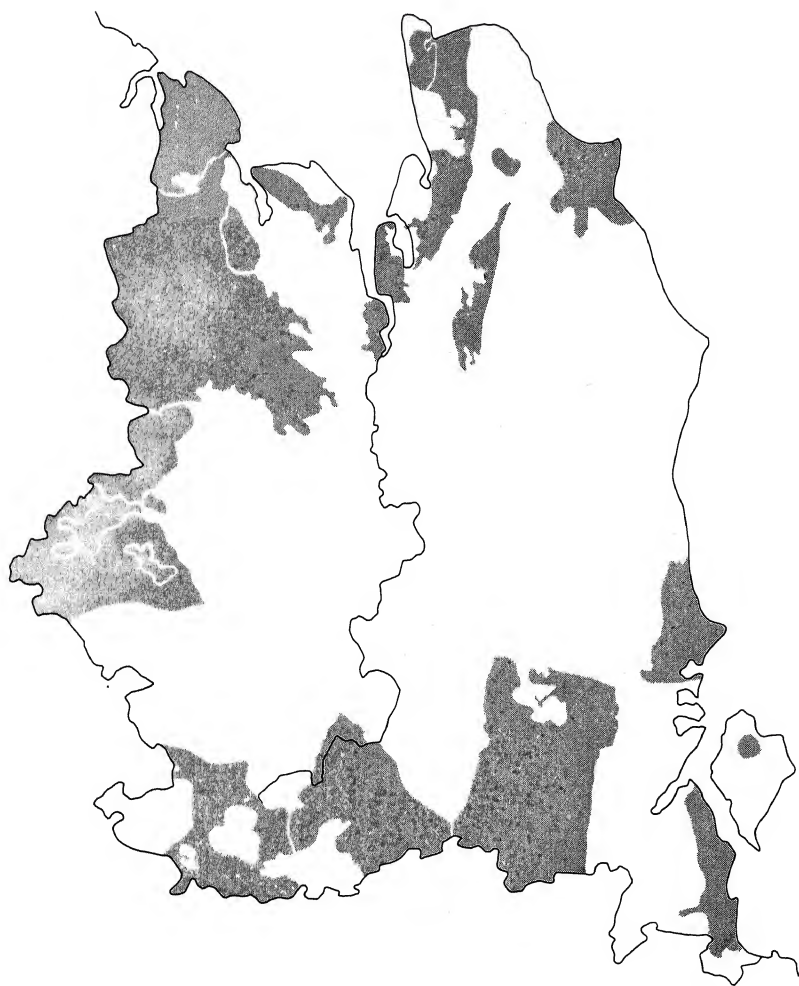


FIG 14 CHANGE IN THE OCCUPATIONAL STRUCTURE OF THE U.K. 1951-2001



**FIG 15 SUPPLY AND DEMAND FOR DWELLINGS IN GREATER LONDON AND THE REST OF THE SOUTH EAST, 1966**



**FIG 16 AREAS OF SPECIAL SIGNIFICANCE FOR AGRICULTURE**



FIG 17 SAND AND GRAVEL AREAS



FIG 18 AREAS OF SIGNIFICANT ENVIRONMENTAL RESOURCES

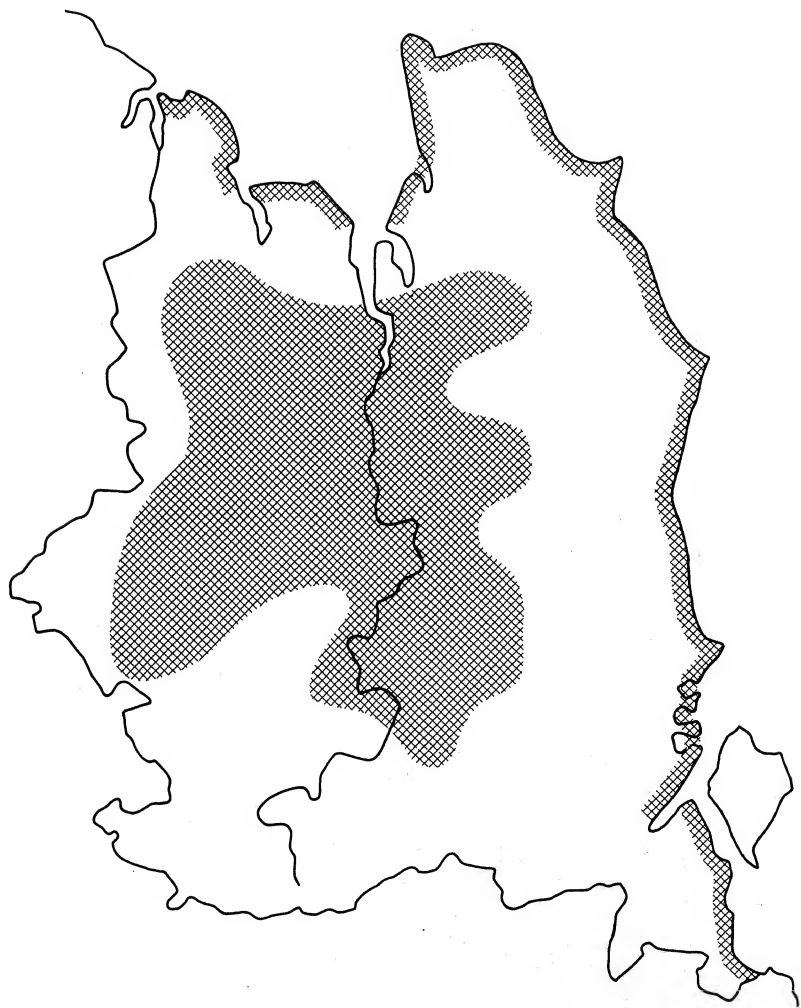


FIG 19 RECREATION PRESSURE AREAS



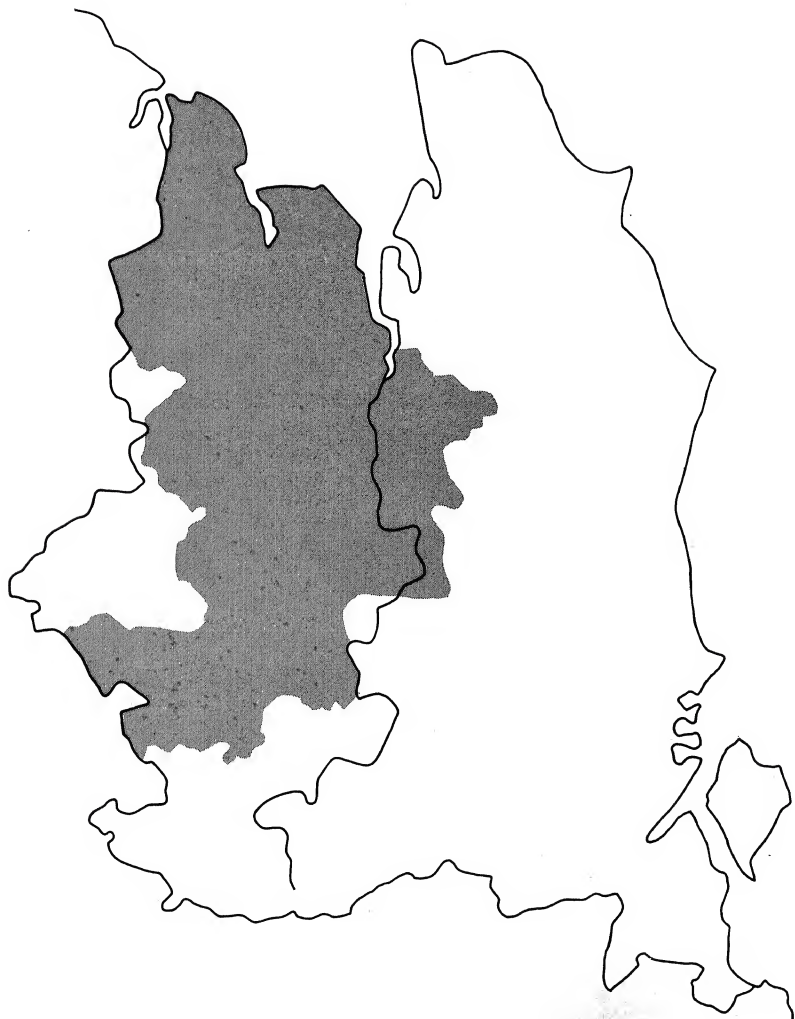
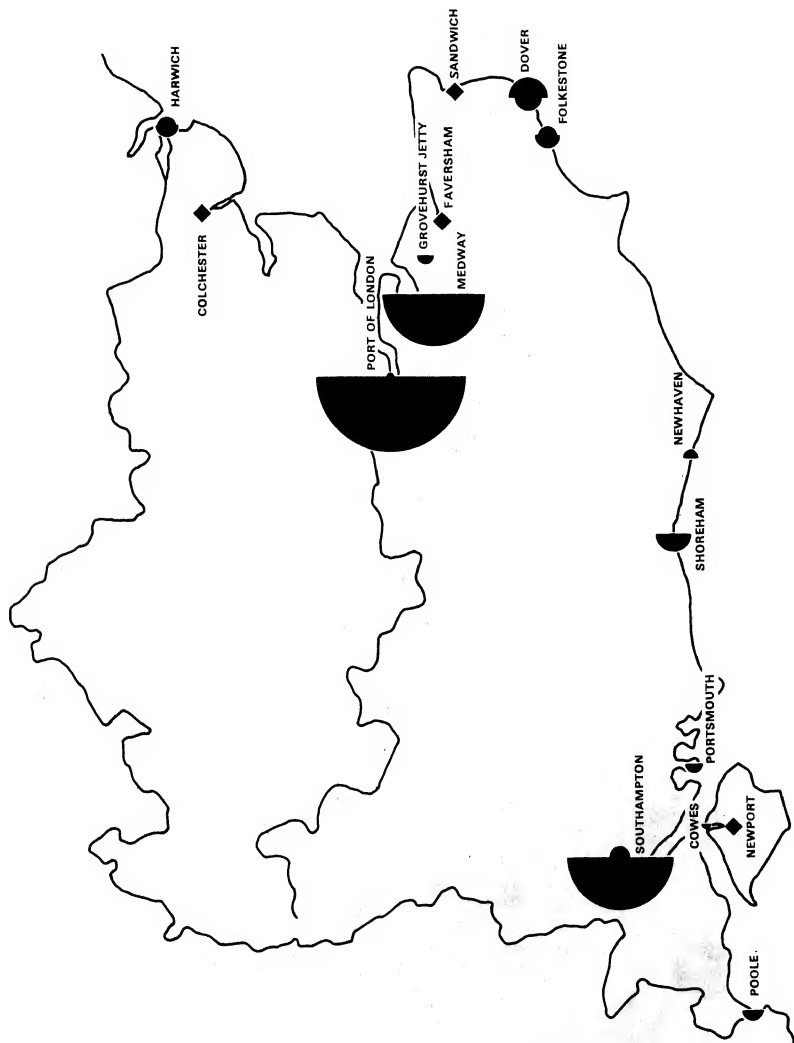
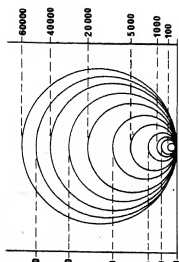


FIG 20 WATER DEFICIENCY ZONE



Numbers in thousands



Total trade 1968 (in tons)

Total passengers 1968

Other Ports

FIG 21 PORTS

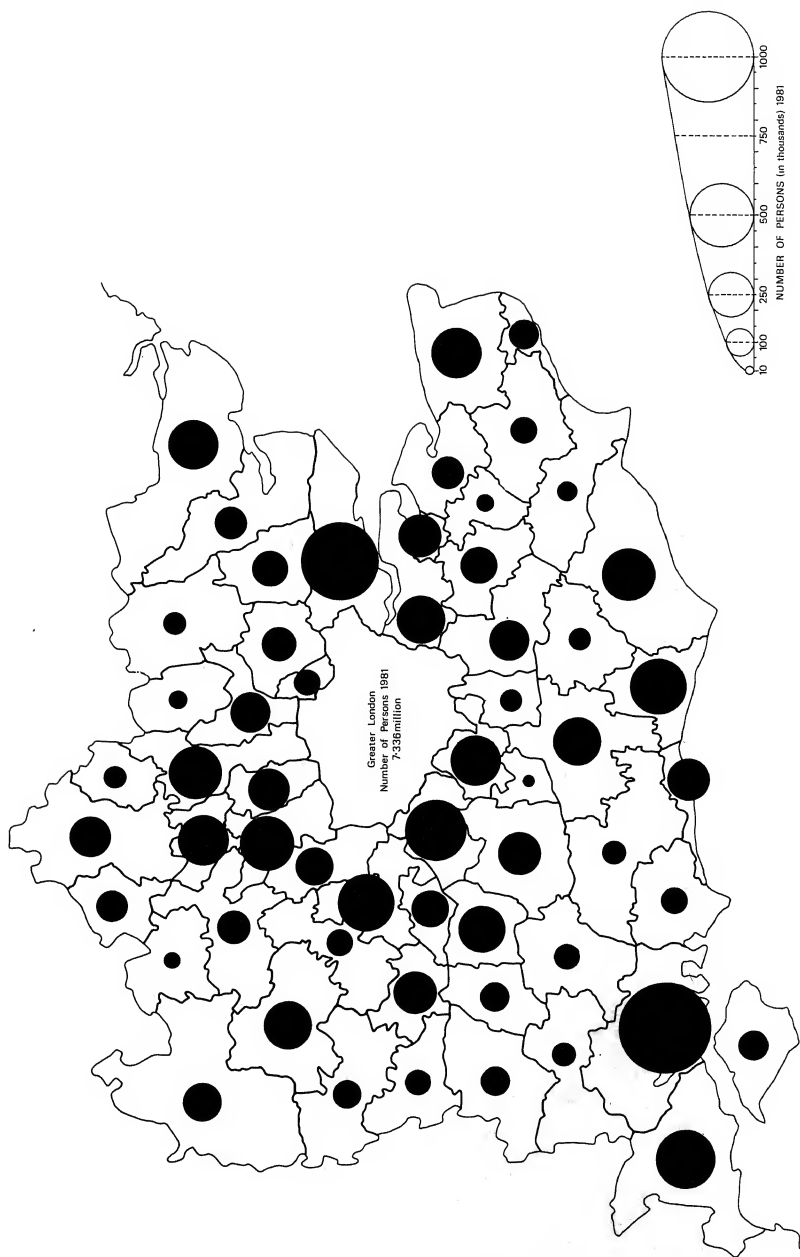


FIG 22 PROBABLE POPULATION 1981

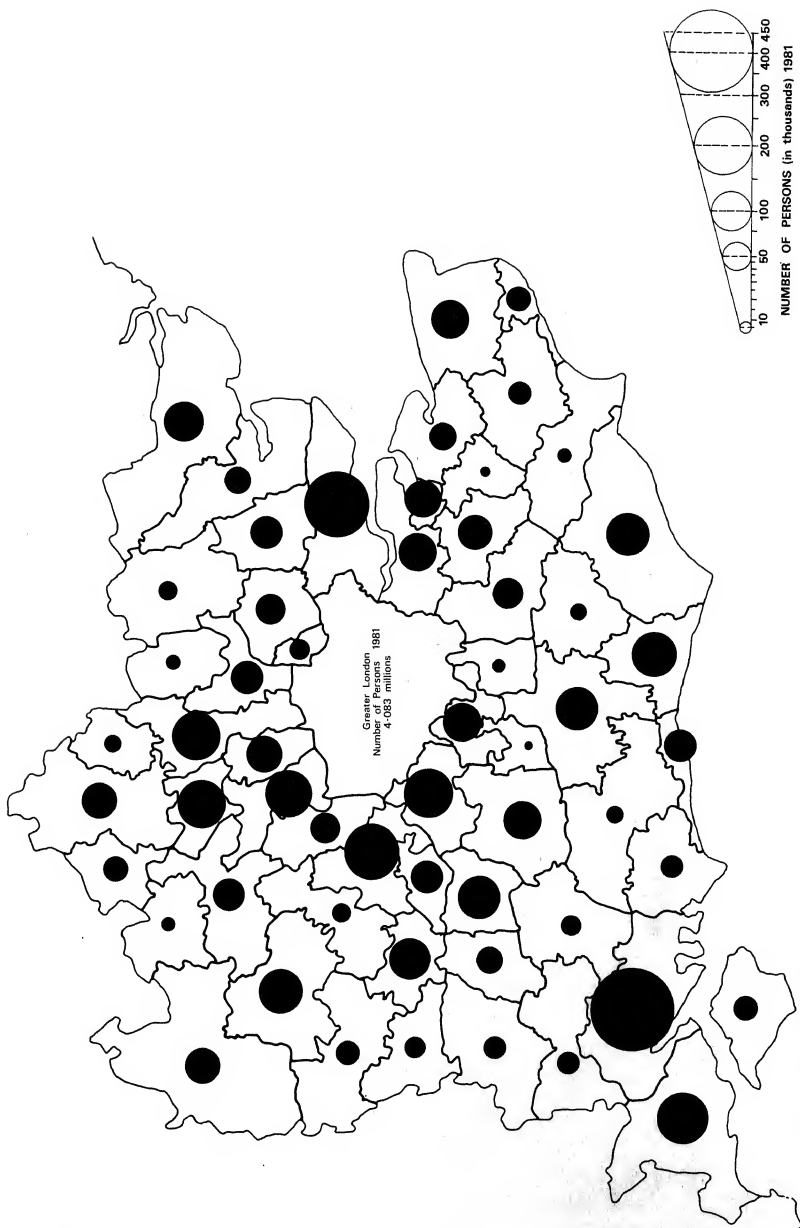


FIG 23 PROBABLE EMPLOYMENT 1981

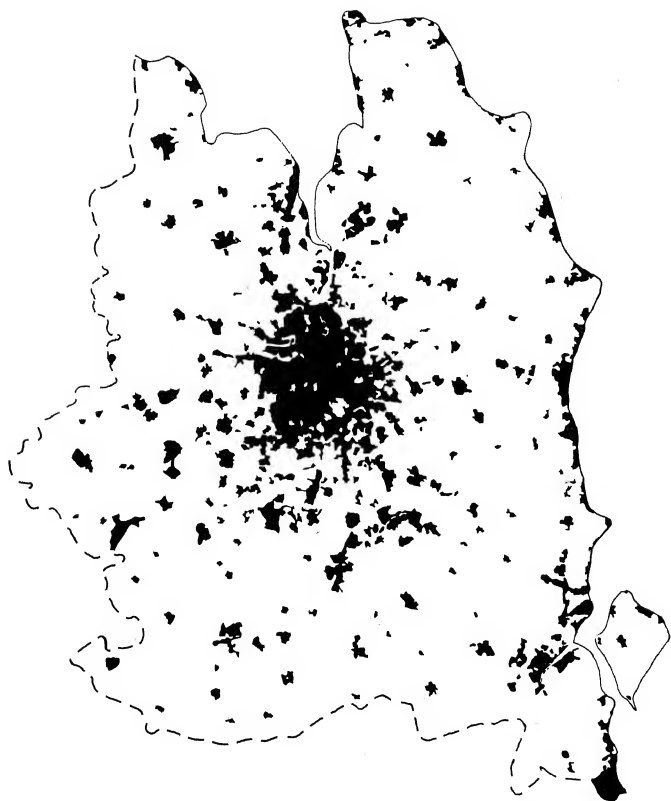


FIG 24 PROBABLE BUILT UP AREAS 1981

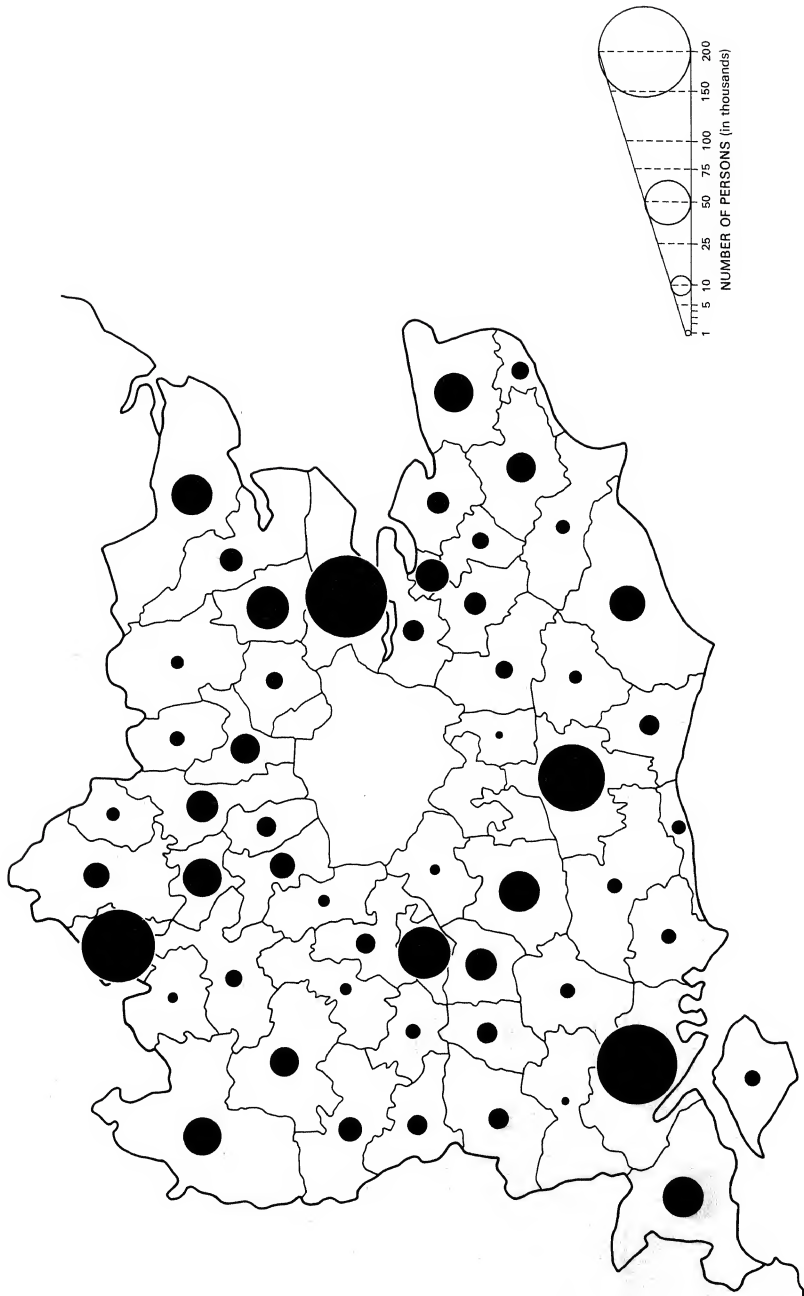
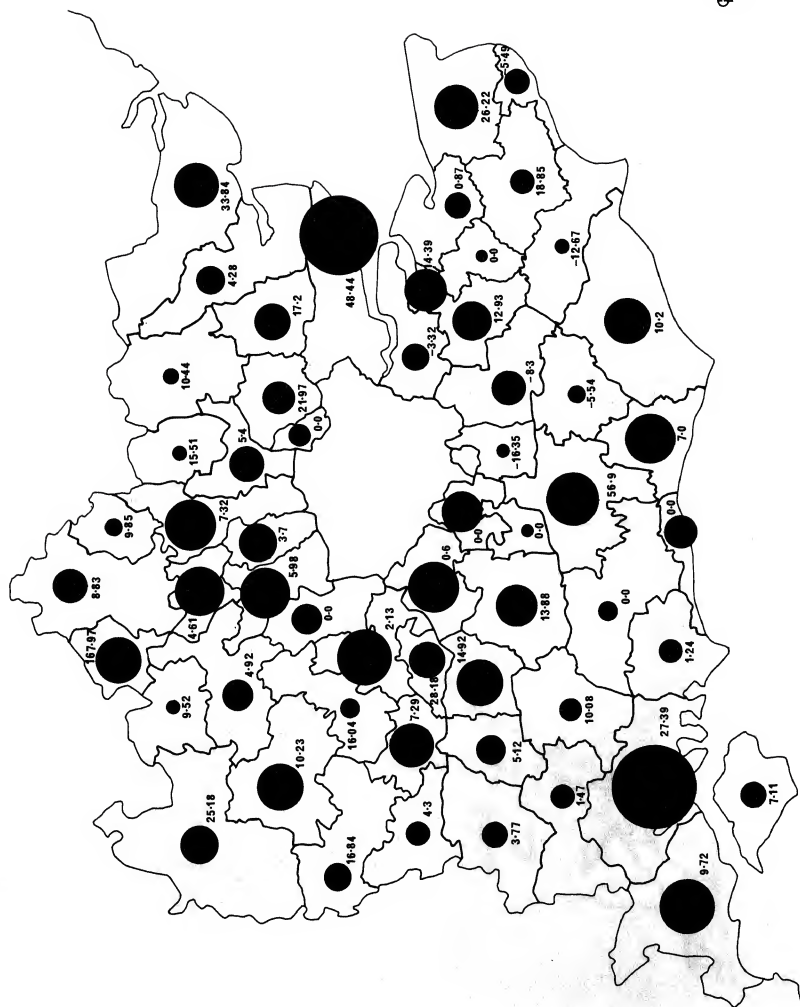


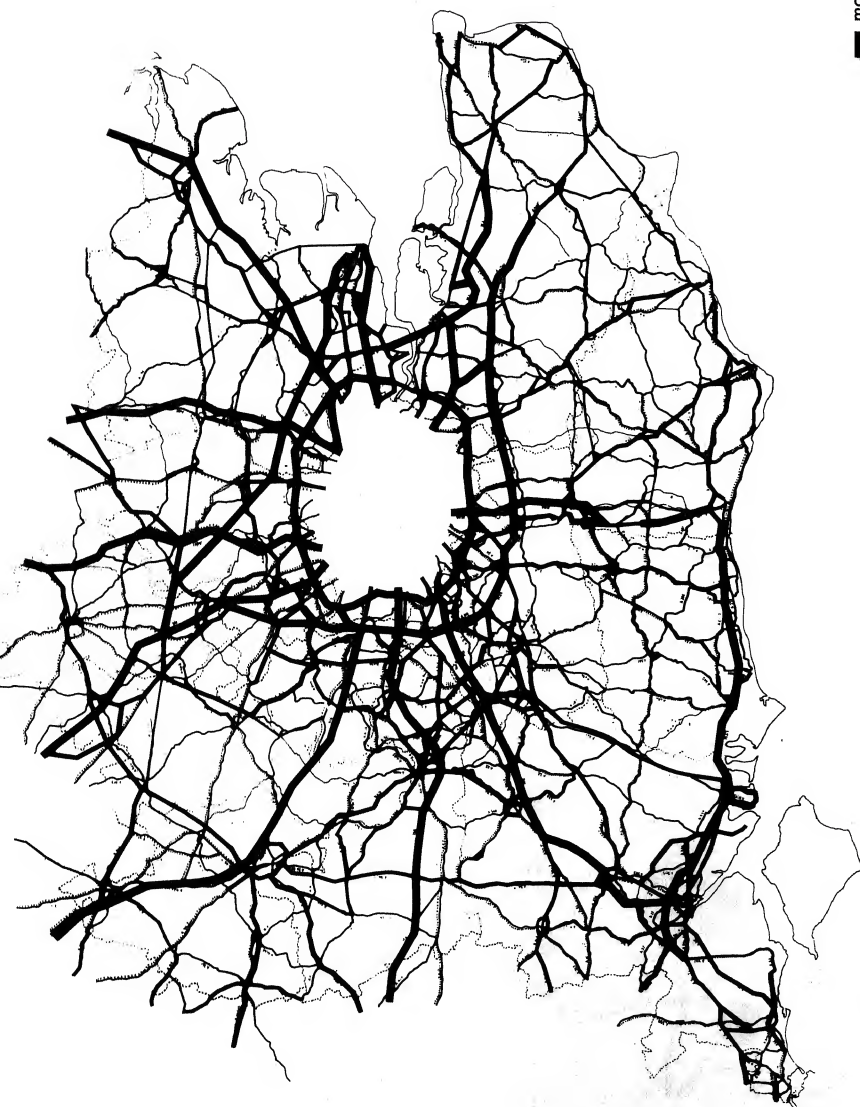
FIG 25 HYPOTHESIS  
1991A POPULATION GROWTH



NUMBERS INDICATE PERCENTAGE CHANGE 1981-1991A

FIG 26 HYPOTHESIS  
EMPLOYMENT 1991A AND EMPLOYMENT CHANGE 1981-1991A





— motorway  
 — dual carriageway  
 ..... good single carriageway  
 — poor single carriageway

FIG 27 CLASSIFICATION OF SELECTED 1991A ROAD NETWORK

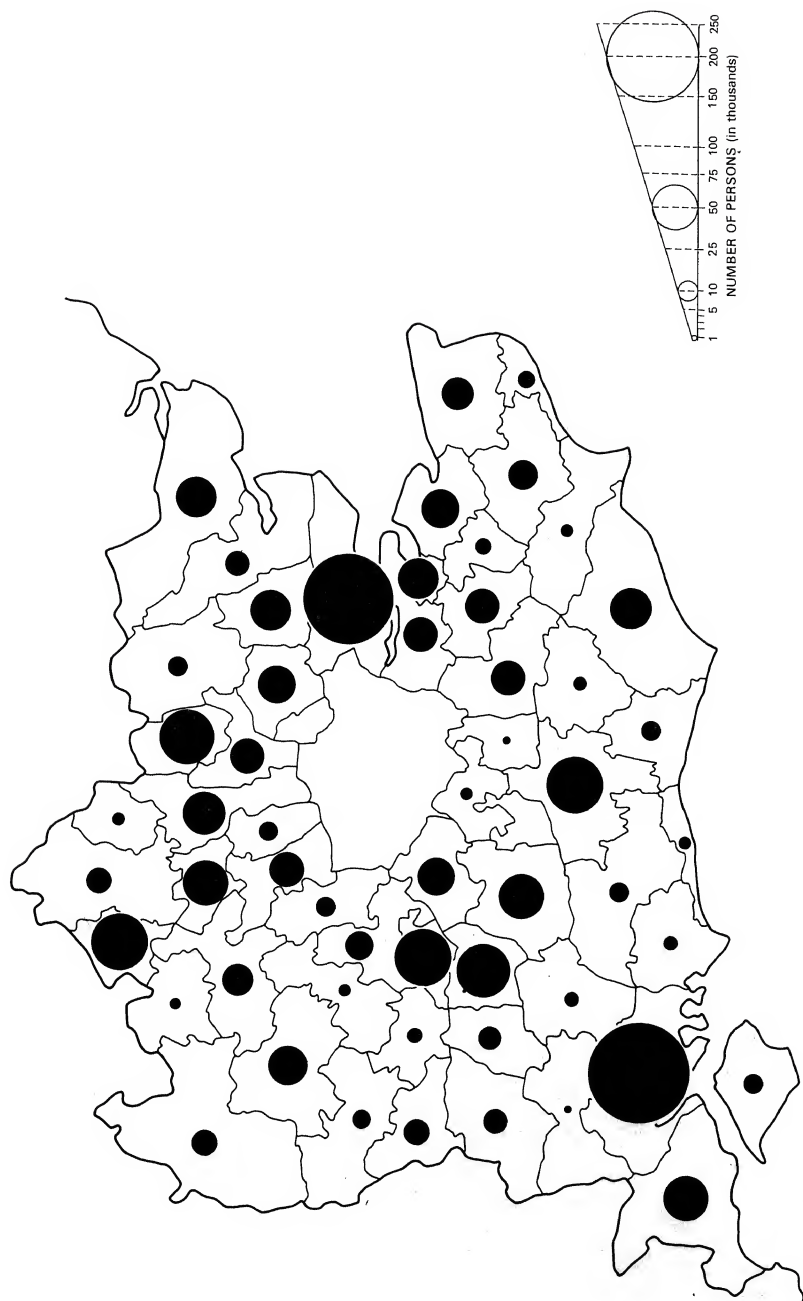


FIG 28 HYPOTHESIS  
1991B POPULATION GROWTH

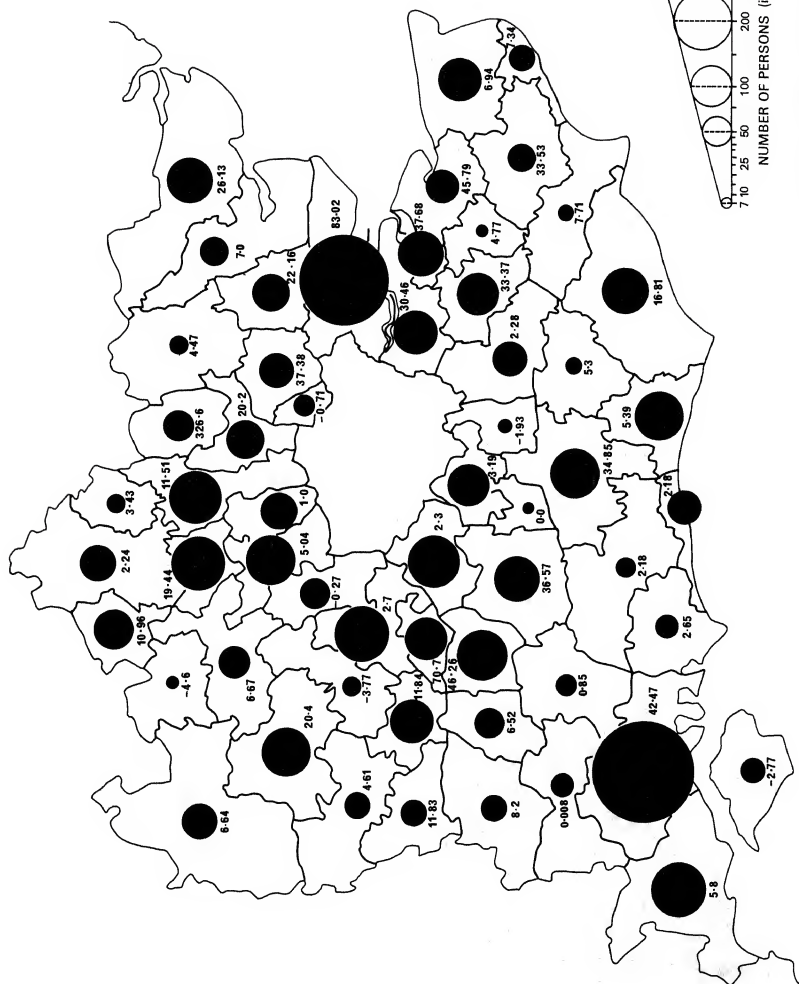


FIG 29 HYPOTHESIS EMPLOYMENT 1991B AND EMPLOYMENT CHANGE 1981-1991B

NUMBERS INDICATE PERCENTAGE CHANGE 1981-1991B

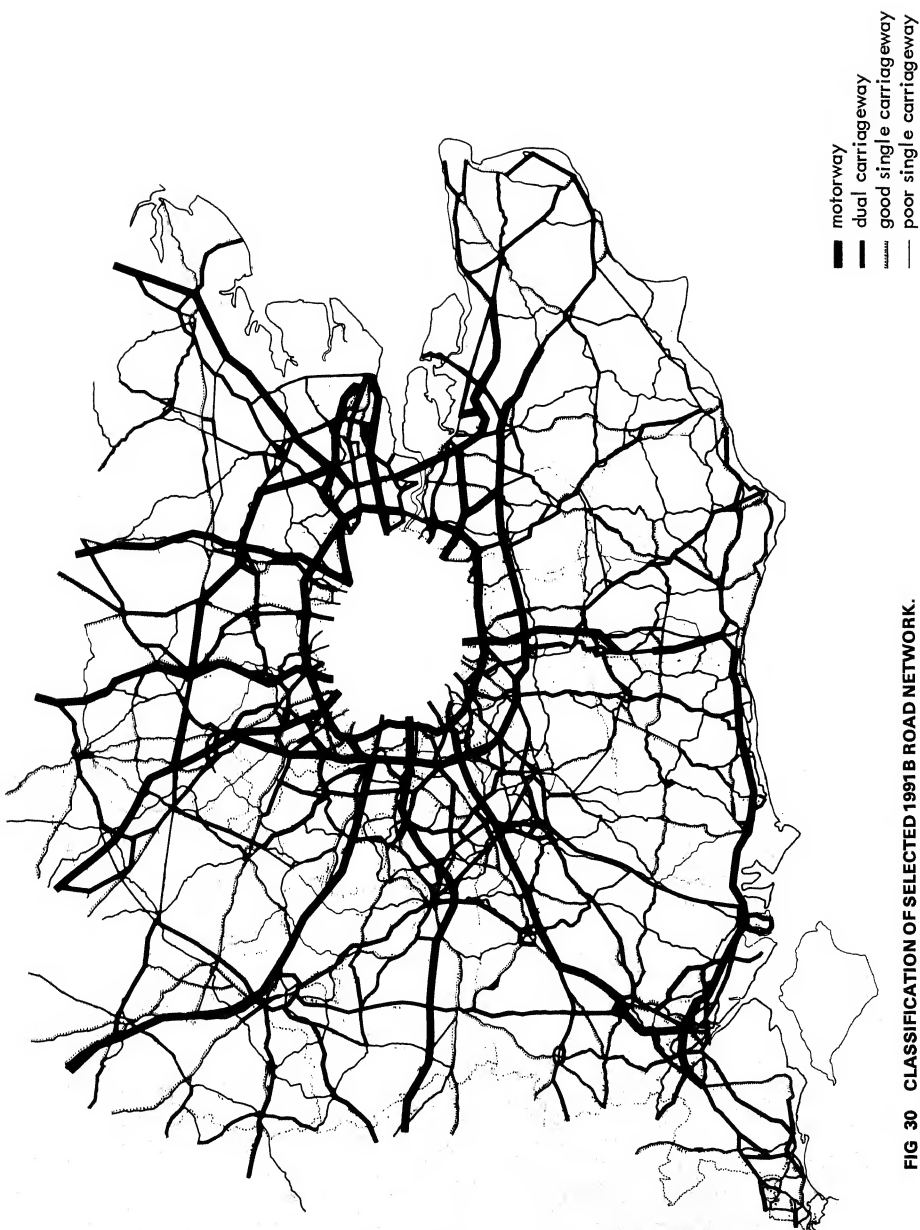


FIG 30 CLASSIFICATION OF SELECTED 1991B ROAD NETWORK.



FIG. 51 STRATEGY POPULATION GROWTH 1966-1991

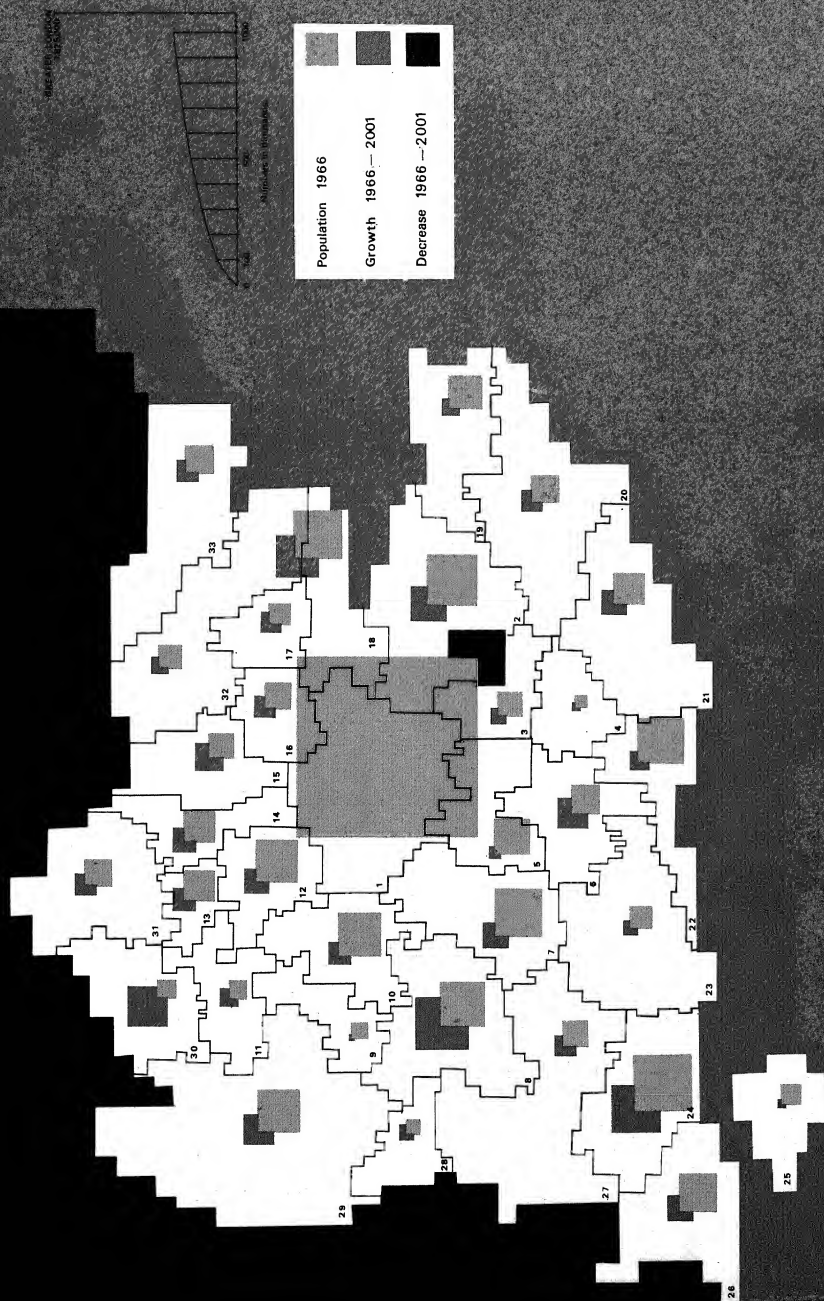


FIG. 32. STRATEGY POPULATION GROWTH 1966-2001





FIG. 33 STRATEGY ROAD FRAMEWORK



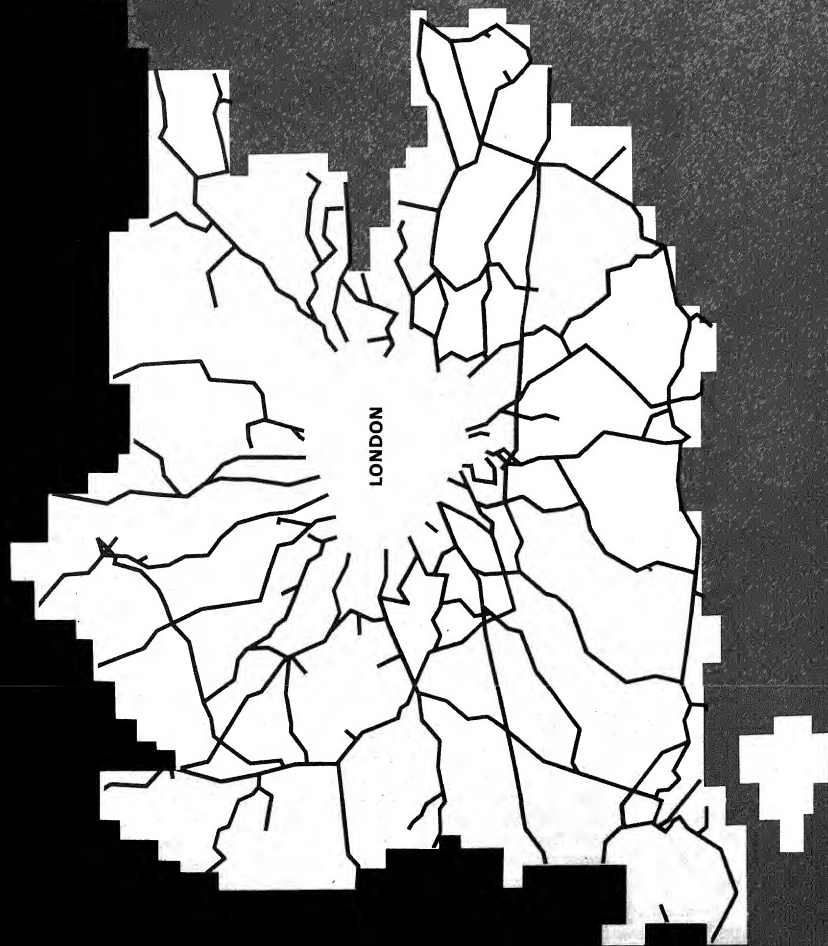


FIG 34 STRATEGY RAILWAY NETWORK

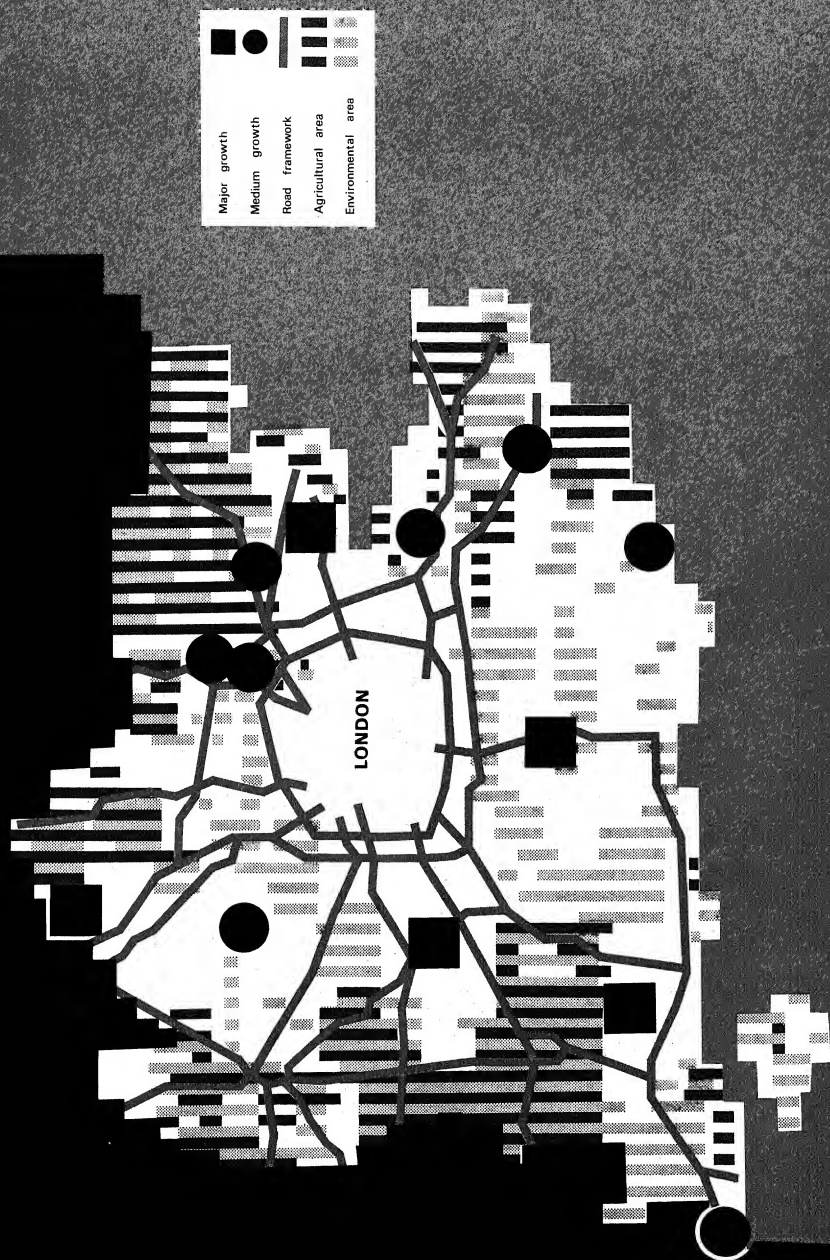


FIG 35 STRATEGY

Planning Districts  
 Outer Metropolitan Area  
 Greater London  
 Inner London

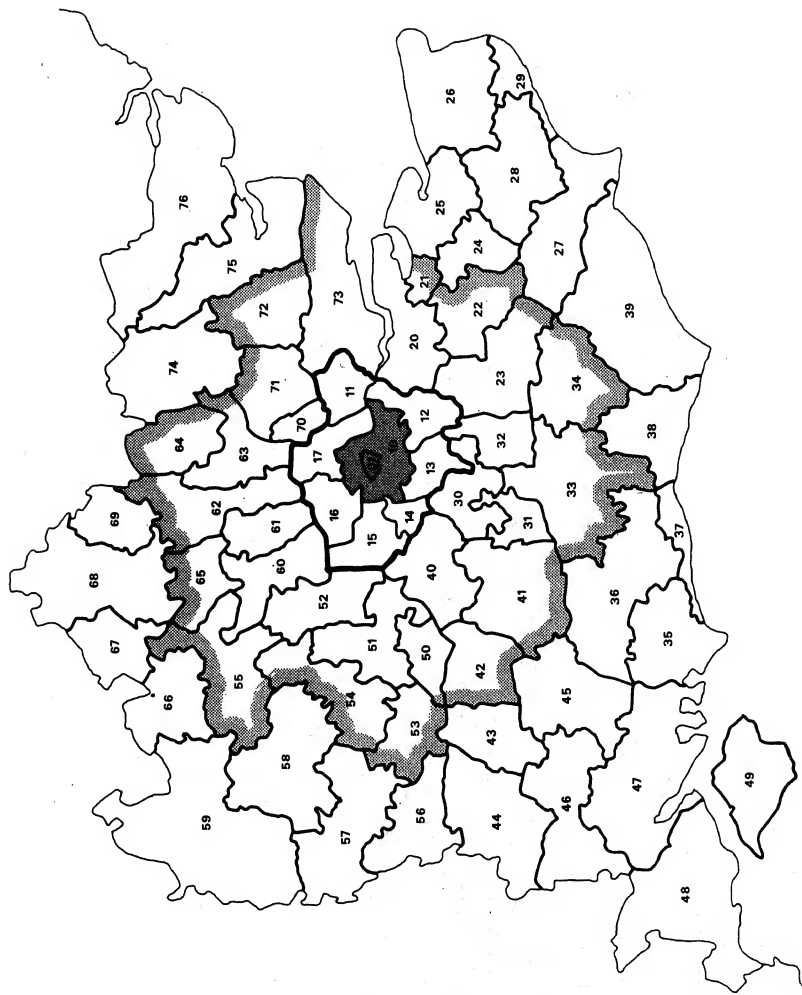


FIG 36 PLANNING DISTRICTS



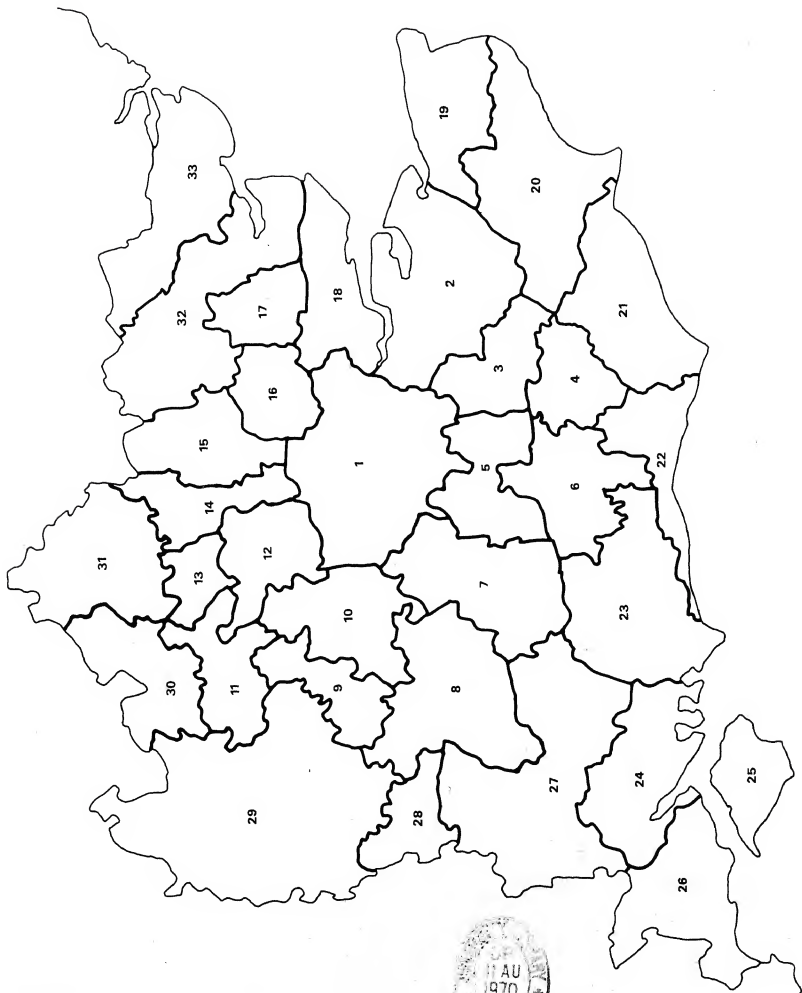


FIG 37 PLANNING AREAS

## INTRODUCTION

1.1 This Report directly concerns the future of an area containing about one third of the population of England and Wales. Indirectly it concerns the future of many millions more, because what happens in South East England has effects throughout the rest of Britain and also, although less obviously, overseas (see Figure 1). It sets out the results of a new planning study of the South East region which was commissioned in May 1968 by the Government, the local planning authorities and the South East Economic Planning Council. The aim of the study was the preparation of a strategic framework for decisions on longer-term local development, public investment and policies within the region.

1.2 The terms of reference agreed by the bodies which commissioned the study were

“To consider and report with recommendations on patterns of development for the South East, taking as a starting point the strategy proposals of the South East Economic Planning Council, but also taking account of the planning work of the Standing Conference on London and South East Regional Planning [representing the local planning authorities] and having regard to Government policies, with the object of providing a regional framework—

- a. for the local planning authorities to carry out their planning responsibilities, including, as appropriate, the preparation of structure plans under the Town and Country Planning Bill now before Parliament [the Town and Country Planning Act 1968], and
- b. for Government decisions on investment, and economic and social policies relating to the region's future development.”

1.3 The commissioning bodies also agreed that the study should be undertaken by a team provided jointly by Government Departments and the local planning authorities. Its members have included architects, economists, engineers, geographers, sociologists, surveyors and town planners, who have been advised and assisted by consultants on economic, social and transportation problems.<sup>1</sup> The time set for completion of the team's work was about 18 months, later extended to two years. This report records the background, stages and outcome of that work.

### Background

1.4 The immediate events which led to the commissioning of the joint study were the publication, in November 1967, of a report by the South East Economic Planning Council, “A Strategy for the South East”, which contained a number of proposals requiring, as the Council pointed out, further detailed examination; and publication of a series of reports by the Standing Conference, “The Conference Area in the Long Term”, which started appearing in July 1966, and which adopted a different approach. It seemed reasonable to invite the Council and the Standing Conference to cooperate with Government Departments in setting up a study to carry forward to a generally acceptable conclusion the planning work already in progress. This the Government did.

1.5 Although these events formed the immediate background, the joint study is in fact the latest of a number of investigations into the strategic planning problems of the region over the last 30 years. In the 1930s there was widespread concern at the drift of population and industry to the South East, and unemployment in many parts of the country was contrasted with the continuing expansion of London. A Royal Commission, under Sir Montague Barlow, which reported in 1940, recommended

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1. The consultants were Economic Consultants Ltd. (economic issues); R. Travers Morgan and Partners (transport issues); and Dr. R. E. Pahl, of the University of Kent at Canterbury (social issues).

nation-wide action to create a better balance of industrial structure between the regions of Great Britain and to secure dispersal of industry and population from congested areas so as to permit their redevelopment. The broad principles of this report, which still underlie planning policy for the regions, found expression first in the advisory plans for the County of London (1943) and the London region<sup>2</sup>, (1944) drawn up by Sir Patrick Abercrombie. These plans suggested among other things halting the outward spread of London by the establishment of a green belt and thinning out the overcrowded parts of London by providing accommodation for some of their population and activities in new and expanded towns beyond this green belt some 20 to 30 miles from Central London.

1.6 Neither of these proposals was new. The first legislation to restrict London's growth was enacted as long ago as the reign of Queen Elizabeth I. More recently much land was acquired between the World Wars by local authorities, particularly after the passage of the Green Belt (London and Home Counties) Act 1938, "to establish", in the words of Lord Morrison of Lambeth, "a green belt or girdle of open space land . . . (round) . . . the completely urbanised area of London". As for the new towns, precursors are to be found in Letchworth (1903) and Welwyn Garden City (1920). In the Abercrombie plans the two concepts were combined to produce a coherent strategy for the future physical development of the metropolitan region.

1.7 The strategy was broadly adopted by a joint committee representing the Government and local authorities and formed the regional planning basis for the first generation of local development plans prepared by the planning authorities of London and the Home Counties under the Town and Country Planning Act 1947. Additional machinery for implementation was provided in the Distribution of Industry Act 1945; the New Towns Act 1946; the National Parks and Access to the Countryside Act 1949; and the Town Development Act 1952. Eight New Towns were designated, planned and built from 1947 onwards—Basildon, Bracknell, Crawley, Hatfield, Harlow, Hemel Hempstead, Stevenage and Welwyn Garden City—and the Metropolitan Green Belt finally became a reality in 1959 when the last of the Home Counties' development plans under the 1947 Act was approved by the Minister of Housing and Local Government.

1.8 Within a few years it became apparent, however, that two basic assumptions of the Abercrombie plans had been falsified by events. First, it had been assumed that employment growth would be restricted by control over the establishment of new industries in the London area. In fact employment grew rapidly, in both manufacturing and the service industries, and particularly in offices, which were not subject to the controls on industrial location. Second, it had been assumed that the population of the South East would be stabilised and possibly might be reduced. This assumption was overtaken by an unexpected surge in the national birth rate in the mid-1950s, and by an influx of immigrants from overseas.

1.9 In face of the heavy pressures for development in and around existing settlements within and beyond the Green Belt and the continuing problems of congestion and inadequate housing in London, the local planning authorities in London and the Home Counties decided that their mutual interests would be best served by a joint organisation through which they could work together on regional planning issues. This led to the establishment, in 1962, of the Standing Conference on London Regional Planning, representing all the local planning authorities in the area covered by the Abercrombie plans. Its purpose was to keep the regional planning situation under review, to recommend joint policies and to provide machinery for coordination of planning activities. Subsequently the membership was extended and now, as the Standing Conference on London and South East Regional Planning, it covers the whole South East region.

1.10 Concurrently the Government began a re-examination of the situation and a White Paper, "London—Employment: Housing: Land" (February 1963)<sup>3</sup>, recognised that "the need to match jobs,

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2. "Greater London Plan 1944", pub. HMSO 1945.

3. Cmnd. 1952.

land, transport and housing over the next 20 years called for a regional plan". The resulting report, "The South East Study, 1961-1981" (February 1964) proposed a second generation of New Towns and major town expansions in the region and the subsequent "Review of the South East Study"<sup>4</sup> (January 1966) sought to give guidance to local planning authorities on the population growth for which they might need to plan. About the same time, office development throughout the metropolitan region was brought under control by the Control of Office and Industrial Development Act 1965. The proposals for new and expanding towns envisaged that some of them might be built up into very large concentrations of people and employment, 50 to 100 miles away from Central London. They might thus be expected to develop into major cities in their own right and so act to some extent as counter-attractions for some of the population and employment which might otherwise be drawn towards London. To date Milton Keynes, Northampton and Peterborough have been designated under the New Towns Act for major expansion schemes and the scale and future pattern of growth in South Hampshire and Swindon are under active consideration.

1.11 A new influence was brought to bear upon the situation by the Government's creation of regional economic planning machinery and the establishment in 1966 of the South East Economic Planning Council. The terms of reference of the regional economic planning councils said they were "to assist in the formulation of a regional plan, having regard to the best use of the region's resources". Meanwhile the Standing Conference had begun its own series of studies (see paragraph 1.4).

1.12 The widely acknowledged need for a fresh appraisal of the region's problems resulted from recognition that

- i. population trends had again changed since publication of the "South East Study" in 1964, with natural increase (the excess of births over deaths) less than had previously been forecast and with a small net outflow of population in place of the previously anticipated net gain through migration;
- ii. the demand for labour in London remained at a high level, although the supply continued to fall due to the continuing decline in London's population, and despite the outward movement of manufacturing industry;
- iii. population pressures in the outer metropolitan area (OMA), surrounding London, remained strong and land allocated for development was being rapidly used up; and
- iv. generally it seemed desirable to consider a strategy going beyond 1981, the end date of local development plans, to guide the Government and the local planning authorities both in the further evolution of policy and development programmes and to provide a background against which immediate problems might be re-examined.

With these matters, among others, the joint study has been concerned.

### The Scope of Regional Planning

1.13 The aims and methods of local planning and the relationship between the Government and local authorities in this field have evolved over many years, the two principal post-war land marks being the Town and Country Planning Acts of 1947 and 1968. Under the 1947 Act local planning authorities were required to prepare and submit for Ministerial approval detailed development plans showing where and when land was to be developed in their areas and the pattern of land use to be achieved over a finite period of years. Under the 1968 Act they will progressively be asked instead to prepare and submit structure plans concentrating on main policies and proposals and dealing with a wider range of matters than the existing development plans, including social and economic questions as well

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4. The review was not published, but population figures arising from it were issued in the Ministry of Housing and Local Government Circular, 5/66.

as urban renewal and communications. Although Ministerial approval of structure plans is required, detailed implementation of the main policies and proposals in the plans is now to be left to local decision. Meanwhile the Government continues to be concerned to ensure that all needs for land are met, that structure plans are realistic in terms of the investment required and that national policies are followed.

1.14 The role of regional planning is much less clearly defined. Its aims and methods are neither fully worked out nor generally agreed. On the one hand it is an extension of local planning, dealing particularly with those matters—the movement and distribution of population and employment; the complex interaction of social and economic needs, the provision of major recreational facilities and the main communications network, for example—which can only be decided for areas much larger than the areas of existing local planning authorities. On the other hand it is concerned with inter-regional flows of population and employment, with the availability and use of resources, and with long-term economic prospects which cannot properly be considered except in the context of the balance to be achieved between growth in one region and growth required in other parts of the country, on which only the Government can decide. A further complication arises from the difficulty of isolating and assessing problems at the regional level as distinct from the local and the national levels. Regional statistics vary greatly in their range, reliability, frequency and comparability and some aspects, such as regional economic performance, are scarcely documented at all.

1.15 In setting out to prepare a regional strategy dealing with the various issues listed above, the joint team was assisted by the close liaison maintained throughout the study period with officers of the commissioning bodies and by its own mixed membership. Thus appropriate weight, so far as possible, has been given at all stages to both local and national considerations. It is hoped that the outcome is a positive contribution to the further evolution of the role which regional planning can and should play in the planning system. The difficulties posed by lack of regional information were met by use of all the material which the commissioning bodies could make available, supplemented by such surveys as could be completed by the team within the time-span of the study.

1.16 It soon became apparent that the concept of a 'master plan' or detailed picture of the region at some particular future date, as required at local level by the 1947 Act, was inappropriate at regional level. First, a framework which will find expression in local structure plans, themselves dealing with broad policies and proposals rather than with detailed patterns of development, should be sufficiently generalized to allow for interpretation in the light of local conditions. Second, the history of planning in the metropolitan region and in the South East generally (see paragraphs 1.4–1.12) demonstrates that the scale and rate of change cannot be accurately forecast for more than a few years ahead, especially having regard to the many major uncertainties, e.g., over the European Economic Community, the Channel Tunnel and technological changes. Third, and perhaps most important, decision-making in a free society can only be influenced and not determined by Government and local authorities who, however, create the context for such decision-making by controls of various kinds, grants and allocations of resources to public investment. The team, therefore, approached its task recognising that its work must be seen as part of a continuous planning process and that the further ahead it looked the less precise its recommendations must be. This resulted in decisions to make recommendations beyond 1981 in the form of objectives and of measures to achieve these, together with an indication, in broad outline, of a pattern of development which might result from their adoption and which might facilitate their achievement.

1.17 The need to regard regional planning as a continuous process, involving the constant up-dating and interpretation of information about the changing regional situation, acknowledges the fact that proposals are constantly being made, decisions taken and developments carried out by public authorities or private bodies and individuals which may have far-reaching effects. One such proposal is for a Third London Airport. In May 1968, shortly after the South East Joint Planning Study was commissioned, the Government announced the appointment of the Commission on the Third London Airport which was required to recommend a site for the airport by the end of 1970. The Commission's work has proceeded concurrently with the joint team's study, and its recommendation will



be made after the study has been completed. Whilst the team has maintained close working relations with the Commission and its research staff, it has been in no position to make any assumptions about the site which will be recommended or adopted. The decision on the airport is likely to be perhaps the largest single investment decision in the region in the next decade and it will have substantial effects on land use and transport in the sector of the region affected. This reinforces the need (see Chapter 10) for a continuing organisation to monitor progress and trends and to ensure that account is taken of matters of national and regional significance which have not been fully dealt with in the team's report.

## Form of the Report

1.18 The form of this report is determined by the methods adopted by the team. The next five chapters summarise the studies of major aspects of the regional situation—people and jobs, people and homes, town and country, public utilities, people and movement—undertaken by the team. From these studies, covering past trends, the present situation and immediately foreseeable needs (which are described at greater length in the SEJPT Studies Volumes I-III, to be published separately) preliminary objectives emerged against which alternative regional strategies could be tested. These are listed, together with measures which might be adopted to secure their achievement. Chapter 7 describes the situation which is expected at 1981 and the following chapter describes two hypothetical situations at 1991 based on two strategic concepts, one that of the Economic Planning Council, which were selected for detailed analysis and evaluation in the light of the preliminary objectives. The evaluation process is described in Chapter 9 and the recommended strategy with the final objectives and measures for their achievement in Chapter 10. A glossary of technical terms used in the report is at Appendix A and a description of the various areas to which reference is made is at Appendix B.

## CHAPTER 2

### PEOPLE AND JOBS

2.1 One of the primary aims of national policy within Britain is to help each region to make full use of its productive resources. The crucial issue for national policy is therefore to strike a balance between the needs of the less prosperous areas, where resources, especially labour, may be wasted, and the needs of the more prosperous areas, where very high levels of demand can lead to labour shortage and increased costs and create land use and congestion problems.

2.2 The South East is pre-eminent among the economically buoyant areas and has been the source of much industrial growth. It houses a population of over 17 million and has maintained a consistently high rate of population growth over the past 150 years; it provides employment for over 8 million workers and accommodates a high proportion of new and fast growing industries.

2.3 Any estimates of population and employment change reflect some view of the relationship between the South East and other regions. Until the long-term employment requirements of the Development Areas, Intermediate Areas and potential national growth areas have been assessed, however, it is impossible to decide whether a continuation of past trends in the movement of firms and establishments of all kinds from the South East will suffice. Present indications are that despite recent intensification of measures to promote the growth of economic activity in less prosperous areas, their needs are likely to continue over the next decade or two. The team has therefore assumed that it will

remain Government policy, for the immediately foreseeable future, to steer, where possible, new employment opportunities from the South East to those parts of the country in need of employment growth.

2.4 Population levels in a region depend, to a large extent, on the level of employment. Should the amount of employment moved over long distances from the South East change, population growth in the region might be less than currently expected (see below, paragraph 2.49 et seq.). No less uncertain are the consequences for the region if Britain becomes a member of the European Economic Community. Central to the arguments for entry is the view that this will produce considerable long-term benefits for the British economy as a whole and it would be expected, if Britain became a member, that this would also lead to an increase in economic activity in the South East, but beyond this it would not be useful to speculate. In the light of these uncertainties it is clear that the regional strategy must be sufficiently flexible to allow for changes either up or down in the levels of population and employment in the region.

2.5 Within the region, and to ensure that the region's resources are not wasted, the strategy must enable the best use to be made of the labour resources available and provide for an efficient distribution of employment. This seems most likely to be achieved by the creation of employment centres of sufficient size to ease problems of labour supply for employers and to offer workers a wide range of employment opportunities, and to allow for other operational economies, without posing substantial journey-to-work or congestion problems. Before considering this in detail it is necessary to consider past trends so that the scale of the problems of the region may be appreciated.

## The Region as a Whole

### Population

2.6 The South East is the only region in England and Wales where the rate of population growth has been consistently above the national average since 1801 (see Table 2.1 below), although this growth has been by no means evenly spread throughout the region.

Table 2.1: Total Population 1801–1969

	England & Wales	South East Region	Rest of England and Wales	South East as % England & Wales
1801	8,893,000	2,499,000	6,394,000	28.1
1851	17,928,000	5,102,000	12,826,000	28.5
1901	32,528,000	10,525,000	22,003,000	32.4
1951	43,815,000	15,216,400	28,598,600	34.7
1961	46,196,200	16,345,500	29,850,700	35.4
1966	47,985,300	17,006,300	30,979,000	35.4
1969	48,826,800	17,294,600	31,532,200	35.4

Source: 1801-1901 Derived from Census Statistics  
1951-1969 GRO Mid-Year Estimates – Home Population

From 2.5 million in 1801 the population grew to nearly 17.3 million in 1969 and the region now has over one third of the population of England and Wales (see Figure 2).

2.7 In recent years there has, however, been increasing stabilisation of population trends between regions. This is partly due to the fact that natural increase forms by far the largest element in population change at regional level, and rates of natural increase in all regions are now of approximately the same order. It is also because net migration flows, the balance between gross migration flows (i.e. between the total number of those who move in and of those who move out), are becoming much less significant, at least in relation to total population change. Over the period 1951–66 the South East gained nearly 1.25 million population by natural increase and rather more than 250,000 by net migration, but in recent years natural change has been at least ten times as great as the net migrational flow. This is despite the fact that gross migration flows are large and increasing. Thus the total number of those who moved into and out of the South East in 1965–1966 was 370,000, but the

net migration flow was a loss of 20,000. This loss was not primarily due to a reduction in the number of immigrants, but to an increase in numbers moving out, especially to East Anglia and the South West. Although the drift to the South from the North, Scotland and Wales continues, as reflected in gross migration movements, the South East is nevertheless, from the point of view of migrational balance, losing population. However, despite this loss, the region will need to continue to accommodate a large increase in population due to the size of natural increase.

2.8 Immigrants from overseas are a particularly significant element in the region's population inflow. Between 1961 and 1966 immigration into Great Britain from all countries amounted to 940,000 persons; of these just over 500,000 settled in the South East, many in London. Nationally there has been a net loss by migration overseas in recent years, but there are no figures for numbers of overseas migrants from the South East. It is, however, apparent that migration flows from abroad are of particular importance for the region and that the Commonwealth Immigrants Act could have a considerable effect on future population levels in the region.

### Employment

2.9 A feature of the migration flow into the region is that it contains a high proportion of young adults, and in consequence the South East's population includes a higher proportion of working age adults—males ages 15 to 64 years and females aged 15 to 59 years and a lower proportion of dependents than elsewhere in England and Wales. In 1966 62.2 per cent of the region's population were of working age compared with 61.2 per cent in the rest of the country. This partly explains the high economic activity rates<sup>1</sup> in the South East. The economic activity rate for males in the region in 1966 was 84.4 per cent against 84.0 per cent in England and Wales and 44.4 per cent for females against 42.3 per cent. The South East is the only region gaining in the proportion of economically active in its population. As a result of this population structure, the total numbers in employment in the region grew proportionately more rapidly between 1961 and 1966—by 600,000 from 7.6 millions to 8.2 millions—than did the population as a whole. The numbers of women in employment grew particularly rapidly, due in part to the expansion of employment in service industries.

2.10 It is no less significant that the proportion of the region's work force in non-manual occupations was greater in the region than in the rest of the country. The main changes in the region's occupation structure since 1961 have been an increase in the proportion of employers, managers and professional staff; a small increase in skilled manual and non-manual occupations; and declines in other occupations (see Table 2.2 below).

Table 2.2: Socio-economic Groups of Economically Active Males at 1961 and 1966

Socio-Economic Groups	England and Wales		South East		Rest of England and Wales	
	1961 %	1966 %	1961 %	1966 %	1961 %	1966 %
Employers, Managers and Professionals	14.26	15.34	16.87	18.55	12.84	13.58
Skilled manual	39.31	39.45	35.30	35.56	41.47	41.58
Non-manual	16.49	17.23	20.49	21.13	14.33	15.08
Semi-skilled	17.92	17.77	15.57	15.22	19.18	19.21
Unskilled	8.35	8.13	7.66	7.20	8.72	8.64
Others	3.69	2.07	4.09	2.39	3.47	1.91
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

Source: Census 1961 and 1966.

These changes are paralleled elsewhere in the country, but elsewhere the trend started later and the rest of the country still lags behind the South East.

1. The economic activity rates given here are the proportions of the population aged 15 and over who are in full-time employment or available for employment (i.e. those registered as unemployed are included in the calculation).

2.11 In the period 1951 to 1961 the amount of employment in offices nationally increased by over 40 per cent compared with an eight per cent increase in all occupations, and by the end of the decade office workers comprised nearly one fifth of all employed workers in the country (see Table 2.3 below).  
 Table 2.3: Changes in Numbers of Office and Other Workers (Economically Active Including Un-employed). 1951-61-66

	1951	1961	Change		1961	1966	Change	
			No.	%			No.	%
<b>ALL OCCUPATIONS</b> (excluding Forces)								
England and Wales	19,792,000	21,387,000	1,595,000	8	21,387,000	22,659,000	1,272,000	6
South East Region	6,902,000	7,685,000*	783,000	11	7,724,000	8,255,000	531,000	7
<b>OFFICE WORKERS</b>								
England and Wales	2,824,000	3,987,000	1,163,000	41	3,987,000	4,551,000	564,000	14
South East Region	1,318,000	1,876,000*	558,000	42	1,882,000	2,154,000	272,000	14

Source: Census 1961 and 1966

\*Excluding Poole

Between 1961 and 1966 the increase continued, but at a somewhat slower pace. The annual percentage increase in the region between 1951 and 1961 was slightly above the national average although in the following five years it was about the same as the national average. Office employment generally however has continued to overtake other forms of employment and to absorb a higher proportion of the region's work force, though the tendency was less marked in the early 1960s.

2.12 It is also important to note that the South East, with little more than one third of the country's total population and numbers in employment, has nearly half the national total of office workers. Further it has over half the national total of office floor space<sup>2</sup> and since over half the extra floor space provided in the country in the years 1964 to 1967 was in the South East (compared with ten per cent in the North West and eight per cent in the West Midlands) the region is still increasing its already large share of total office floor space (see Table 2.4 below)

Table 2.4: Net Increases in Office Floorspace, 1964-1967, and Total Floorspace, 1967  
 Square feet

	Net Increase * 1964-1967		† Total Office Floorspace 1967	
		%		%
South East	19,423,000	56	195,300,000	51
East Anglia	718,000	2	8,300,000	2.1
South West	1,882,000	5	19,500,000	5.3
West Midlands	2,669,000	8	26,700,000	7.1
East Midlands	1,670,000	5	15,200,000	3.9
Yorks and Humberside	2,076,000	6	26,300,000	6.9
North West	3,547,000	10	61,200,000	16
Northern	1,362,000	4	17,400,000	4.3
Wales	1,037,000	3	12,600,000	3.4
England and Wales	34,384,000	100	382,500,000	100

\*Source: Inland Revenue

†Source: MHLG Provisional Calculations

2. The figures for office floor space are for separately rated office floor space and therefore exclude offices within manufacturing establishments.

2.13 In terms of people in employment therefore the South East has a net inflow of economically active people, high activity rates, more women at work and a higher proportion of the working population in higher socio-economic groups and in office occupations than other regions.

## Industries

2.14 The team's analysis of the region's industrial structure had to be based on the total numbers employed in each industry, since there is inadequate information at regional level on output and productivity. (The broad industrial structure in 1966 of parts of the region, and of England and Wales, is shown in Figure 6).

2.15 In relation to total employment, primary industry (agriculture and mining) is insignificant in the South East. Service industries, however, accounted for almost 60 per cent of the region's total employment in 1966, eight per cent more than the average for England and Wales, and the region's rate of growth in these rapidly expanding industries has been consistently above the national average. One important element is employment in "public administration and defence" which grew substantially in the region between 1961 and 1966, by nearly five per cent, although the proportion declined elsewhere in the country. The past rapid growth of employment in service industries in the region may not, however, be maintained if for example the Government's policy of dispersal to areas outside the region is successful.

2.16 The manufacturing industries employed about 30 per cent of the region's labour force in 1966 (about 2.5 million workers), five per cent less than the national average, and the proportion has been declining more swiftly than nationally. Only engineering and electrical goods, timber and furniture, paper, printing and publishing, and the miscellaneous group of manufacturing industries in the 1958 Standard Industrial Classification employed more workers than the national average. The region's greatest specialisation in any particular group of manufacturing industries is in paper, printing and publishing, partly due to the very high concentration of these activities in London.

2.17 More important from the point of view of growth, the engineering and electrical goods group, whose products range from heavy capital equipment to light consumer durables, employed almost three times as many workers as any other manufacturing group in the region (although employing only slightly more than the national average). Within this group, the South East provides two-thirds of the country's total employment in the rapidly expanding radio and other electronic apparatus industry (which accounted for nearly 10 per cent of the region's employment growth between 1961 and 1966) and nearly two-thirds of the country's employment in the office machinery and the scientific, surgical and photographic instruments industries, both of which are growing rapidly.

2.18 Thus the region has a very low proportion of employment in declining industries, a high proportion in growth industries, and a very high proportion in the rapidly expanding service industries. (Employment structure of the South East in 1966 in relation to England and Wales is shown in Figure 7).

## Changes Within the Region

### Population

2.19 Of the South East's estimated population of about 17.3 millions in 1969, 45 per cent lived in Greater London (just over 7.7 millions), 30 per cent in the Outer Metropolitan Area (just over 5.25 millions) and 25 per cent in the Outer South East (just over 4.3 millions) (see figure 3) The changes which have taken place in these areas since 1951 are shown in Table 2.5 below.

Table 2.5: Population of Major Divisions of the South East Region 1951–69

	South East Region	Greater London		OMA		OSE	
	Total	Total	% of Region	Total	% of Region	Total	% of Region
1951	15,216,400	8,208,900	54.0	3,505,700	23.0	3,501,800	23.0
1961	16,345,700	7,980,400	48.8	4,517,600	27.6	3,847,700	23.5
1966	17,006,400	7,836,200	46.1	5,009,000	29.5	4,161,200	24.5
1967	17,122,300	7,804,500	45.6	5,088,900	29.7	4,228,900	24.7
1968	17,229,500	7,763,800	45.1	5,178,700	30.1	4,287,000	24.9
1969	17,294,600	7,703,400	44.5	5,253,000	30.4	4,338,200	25.1

Source: GRO Home Population Changes 1951-69 (mid-year estimates)

2.20 Over the period 1951–1968 Greater London lost about 450,000 population, an annual average loss of about 26,000 (see Table 2.6 below) and the loss during the latter part of the period was considerably higher than during the 1950s.

Table 2.6: Estimated Population Change Greater London 1951–1968

	Total Natural Change	Annual Average	Total Migration Balance	Annual Average	Total Change	Annual Average
1951-61	333,400	33,300	–561,800	–55,700	–228,400	–22,300
1961-66	261,700	52,300	–406,000	–82,200	–144,300	–29,800
1966-68	92,600	46,300	–164,900	–82,400	– 72,300	–36,200
1951-68	687,700	40,500	–1,132,700	–66,600	–445,000	–26,200

Source: GRO Home Population changes 1951-1968 (mid-year estimates)

The net outflow of population was running at an average of 82,000 a year for most of the 1960s. This was made up of an average gross outflow of approximately 212,000 per annum and a gross inflow of approximately 130,000 per annum (recently lower because of limitations on immigration from overseas).

2.21 Over the period 1951–1968 the Outer Metropolitan Area increased its population by nearly 1.7 millions (see Table 2.7 below) and its share of the region's population by seven per cent from 23 per cent to 30 per cent (see Table 2.5 before).

Table 2.7: Estimated Population Changes for the Outer Metropolitan Area 1951–68

	Total Natural Change	Annual Average	Total Migration Balance	Annual Average	Total Change	Annual Average
1951-61	241,600	24,200	769,900	77,000	1,011,500	101,200
1961-66	217,000	43,400	274,400	54,900	491,400	98,300
1966-68	84,600	42,300	85,100	42,500	169,700	84,800
1951-68	543,200	32,000	1,129,400	66,400	1,672,600	98,400

Source: GRO Population changes 1951-1968 (mid-year estimates)



Population growth in the OMA due to net migration averaged the high figure of 77,000 per year in the 1950s. This was in part due to movement to expansion schemes planned under the New Towns Act and the Town Development Act, but it is important to note that this migration never amounted to more than 14 per cent of the OMA's total net inflow. Over the period 1961–68 growth due to migration dropped well below 50,000 annually. From the point of view of the strategy it is however, more important to match as far as possible population and employment growth than to distinguish between “planned” and other movements of population.

2.22 Within the OMA the fastest growing areas, in both numerical and percentage terms, have been the Guildford/Aldershot/Reading area, where a number of Government research establishments, with links to both the private and public sectors of industry, are concentrated; and in the eastern sub-division of the OMA, which includes the New Towns of Basildon and Harlow. Other places in the OMA where both population and employment growth have also been above average are Crawley UD much of Hertfordshire; and the western subdivision of the OMA, largely due to industrial expansion at Slough, Maidenhead and High Wycombe and to population growth in the commuter villages of the Chilterns.

2.23 The population of the Outer South East in 1951 was only slightly less than the population of the OMA. Each then had a population of just over 3.5 millions (see Table 2.5 before). The OSE's population increased by over 780,000 in the period 1951–1968 (see Table 2.8 below), and the annual average gain on balance from migration in 1966–68 was about 50,000 appreciably more than that of the OMA.

Table 2.8: Estimated Population Change for Outer South East 1951–68

	Total Natural Change	Annual Average	Total Migration Balance	Annual Average	Total Change	Annual Average
1951-61	88,800	8,900	257,000	25,700	345,800	34,600
1961-66	72,500	14,500	241,000	48,200	313,500	62,700
1966-68	27,900	14,000	97,900	49,000	125,800	62,900
1951-68	189,200	11,100	595,900	35,000	785,100	46,200

Source: GRO Home Population changes 1951-1968 (mid-year estimates)

2.24 Population growth has been largest numerically in the South Hampshire and Oxford areas.

## Employment

2.25 As has already been pointed out, economic activity rates in the South East are generally higher than nationally. Male activity rates<sup>3</sup> do not vary substantially between the various parts of the region but the southern sub-divisions of the OMA, the Sussex Coast and the Berkshire/Oxfordshire area have rates below the regional average, partly no doubt a result of retirement.

2.26 The proportion of women at work, however, varies considerably. The activity rate in Greater London is outstandingly high, with 67 per cent of the female population economically active, but in both the OMA and the OSE the rates are lower, approximately 55 per cent. Within the OMA the difference between areas is small, the highest rates being to the north and the north-west of London, the lowest to the east and south-east. In the OSE however the spread is wider, from 59 per cent on the Sussex coast to 50 per cent in those parts of Essex within the OSE. Although the socio-economic

3. The activity rates given here (cf paragraph 2.9) are the proportions of males aged 15–64 in full time employment and females aged 15–59 (i.e. the older age groups and unemployed are excluded from this calculation).

background and accessibility to Central London appear to be significant factors influencing these activity rates, there seems no doubt that increases in local job opportunities also have a direct influence.

## Employment Centres

### London

2.27 The major employment centre in the region, and in the country as a whole, is Greater London. Greater London provided over half the region's total employment (4.45 million jobs out of a regional total of just under 8.22 million) in 1966. The proportion is, however, less than in 1961 (54.7 per cent against 57.5 per cent) and growth in the number of jobs in London over these five years was only 67,000, or about one-fifth of the percentage rate of growth in jobs in the region as a whole (see Table 2.9 below).

Table 2.9: Employment in the Major Divisions of the South East Region 1961–1966

	1961		1966*		Change	
	Total	%	Total	%	Total	%
Greater London	4,383,000	57.5	4,450,000	54.7	+ 67,000	1.53
OMA	1,740,000	22.8	2,060,000	25.1	+320,000	18.39
OSE	1,500,000	19.7	1,709,000	20.8	+209,000	13.03
TOTAL REGION	7,623,000	100.0	8,219,000	100.0	+596,000	7.82

Source: 1961 and 1966 Census

\*The 1966 census figures have been adjusted for underenumeration.

2.28 It is important to distinguish between employment in the centre and in the remainder of London. Central London, which corresponds very broadly in extent with the area bounded by the main line railway termini, is an international centre of commerce and finance; the seat of Government; the headquarters of high proportion of the country's major business and professional concerns; and a national centre for culture, for the mass communications media, for tourism and for shopping. The importance in national economic terms of Central London, which provides in the City a unique combination of interlinked financial and commercial services, may be gauged from the fact that the direct annual earnings from abroad from financial and similar institutions appear to have averaged out at approaching £250 million over the three years 1965–67. The Stock Exchange deals in more foreign securities than any other exchange in the world. International tourism is increasingly important to the national economy and about half the country's earnings from overseas visitors in 1967 were made in the centre of London. In shopping too Central London is pre-eminent. On the basis of the last Census of Distribution (1961) Central London's shops had a turnover of £382 millions, more than double the shopping turn-overs of Birmingham, Liverpool and Manchester combined.

2.29 To provide these services Central London employed about 1.3 million workers in 1966, but only a quarter of a million people lived there. Of the 1.3 million workers, 40 per cent came from Inner London and 36 per cent from Outer London; of the rest, 8 per cent lived and worked in Central London, 14 per cent travelled from the OMA and 2 per cent from the OSE. Functionally the employment structure of the central area is dominated by service industries, which account for over one million of the total number employed. Of the activities which come under the heading services, Central London specialises particularly in insurance, banking and finance. Manufacturing has become progressively less important as an employer of labour, but over 250,000 workers are still employed in



manufacturing industries, particularly in paper, printing and publishing; engineering and electrical goods; clothing and footwear. Occupationally office employment dominates. In 1966 there were over 750,000 office jobs in the centre and over half the employment in manufacturing industries was in office jobs.

2.30 Between 1951 and 1961 the number of jobs in Central London increased by nearly 80,000 but in the following five years the number declined by 65,000 (five per cent) a figure that equates with the fall in the number of jobs in manufacturing industries. This means that although the relative importance of services has increased, the employment provided in these industries has remained stable. Within the service industries there were, however, significant increases in the number of workers in professional and scientific services and in insurance, banking and finance, while clerical employment in general declined. The pre-eminence of London as an office centre is underlined by the fact that it accommodates over half the region's office floor space and this proportion has continued to expand. It appears, however, that the amount of extra floor space becoming available is falling off, as an increasing proportion of new floor space is simply replacing obsolete property on redevelopment.

2.31 Although employment in the centre fell, between 1961 and 1966, employment in the rest of Greater London increased by 130,000 (four per cent) to over 3 million in 1966. Of the 3 million, 1.9 million jobs were in Inner London (which, for this calculation is the former LCC area minus Central London) and 1.1 million in Outer London. During the same period office employment, which levelled off in the centre, increased elsewhere in London (and also in the rest of the region). This suggests that routine clerical work is being decentralized; that offices of some manufacturing firms are moving from separate locations to join production units; and that a number of small office firms are moving out to cheaper premises.

2.32 There were substantial journey to work flows to the centre in 1966 from both Inner London (over 500,000) and Outer London (nearly 500,000), but both in turn attracted substantial flows from places outside Greater London (nearly 50,000 in the case of Inner London and nearly 173,000 in the case of Outer London). These flows were in large part due to extensive employment opportunities in the north-west and south-west parts of Outer London, most notably in development in and around Heathrow and in office centres in West London and Croydon. By contrast, on the eastern side of London the decline of a number of traditional industries (e.g. clothing, timber, the up-stream docks and latterly heavy engineering in south-east London) and some closures due to rationalisation have released fairly large numbers of workers.

## OMA and OSE

2.33 Employment in the OMA grew by over 300,000 (nearly one fifth) from just under 1.75 millions in 1961 to just over 2 million in 1966, or one quarter of the total employment of the region. Concentrations of employment which showed relatively high rates of growth in the OMA were South Essex, Hertfordshire (together with the Luton/Dunstable area). North Kent and the Slough/Reading areas. Employment in the OSE grew less fast (by 14 per cent) over the same five year period, but the OSE now has nearly one fifth of the region's total employment. Concentrations of employment with relatively high growth rates in the OSE were South Hampshire, Oxford and the South Coast towns.

2.34 The distribution of employment in 1966 was used by the team to distinguish "major employment centres". These were defined as towns having a minimum of 20,000 jobs and an employment density of over 4.6 workers per gross acre of the local authority's area (see Table 2.10 below).

This is a crude definition with arbitrary cut-off points. Analysis of these centres was further complicated by the fact that recent industrial development has, in very many cases, occurred in fringe areas lying beyond the local authority boundary of the main employment base. Despite these limitations, the analysis was nevertheless useful in indicating areas of employment concentration. The journey-to-work hinterlands and self-containment of employment centres outside Greater London are shown in Figures 12 and 13.

Table 2.10: Major Employment Centres in the South East Outside Greater London

## EMPLOYMENT IN 1966

Portsmouth	109,580	Stevenage	28,260
Southampton	101,860	Rochester	27,510
Luton	82,010	Eastbourne	27,190
Oxford	79,770	Walton and Weybridge	27,170
Brighton	68,590	Worthing	26,610
Reading	65,340	Woking	26,600
Bournemouth	61,320	Chatham	26,120
Slough	59,970	Gosport	25,600
Thurrock	58,420	Hove	25,320
Southend-on-Sea	57,020	Hastings	24,220
Watford	53,070	St. Albans	24,110
Basildon	41,850	Havant and Waterloo	22,630
Chelmsford	36,400	Welwyn Garden City	22,400
Bedford	35,840	Dartford	21,780
Colchester	35,220	Reigate	21,600
Maidstone	33,090	Fareham	21,180
High Wycombe	32,870	Esher	20,880
Crawley	32,250	Aylesbury	20,450
Guildford	29,930	Letchworth	20,070
Hemel Hempstead	28,830	Canterbury	20,050
Harlow	28,520		

Source: Census

2.35 An examination of the degree to which the major employment centres listed specialise in certain industries showed that the engineering and electrical goods industries, which are expanding in employment rapidly, are the most widely distributed. No particular centres stand out, but representation is most heavily concentrated in the OMA and in employment centres in the Outer London boroughs. Because this group of industries is the most mobile, as well as the fastest growing, it is particularly strongly represented in the New Towns, where the experience of individual firms highlights the importance of expansion as a spur to relocation, and emphasises the rapidity of employment growth in the early years after relocation, as well as the continuance of growth at above average rates for many years.

2.36 A number of areas in the region have serious labour shortages (that is, have a high ratio of unfilled vacancies to unemployed). These form an arc stretching from Crawley westwards and northwards to the New Towns of Hertfordshire. The type of shortage varies from area to area, but it is clear that there are long-term shortages of skilled labour in the manufacturing industries, together with fairly general demands for female labour and some demand for unskilled workers who can be retrained.

## Mobility and Location

2.37 Any strategy for the region must depend in part on the possibility of moving employment, and especially employment growth to selected new locations, and in part on the encouragement of indigenous employment growth in the new centres. In examining the possibility of movement of manufacturing employment in the light of past trends the team was assisted by the interim results of a new inquiry into locational attitudes undertaken by the Ministry of Technology (the early stages of which were linked to the team's requirements) as well as by the work of Economic Consultants Ltd. who were appointed specifically to analyse the problems of location of industry and employment

mobility, and whose independent report is printed separately with the Studies Volumes. On the movement of office employment, the team had access to the records of the Location of Offices Bureau.

2.38 Mobile employment may be simply defined as the employment which moves from where growth is incipient and which can therefore help in strategic restructuring of the region, but in fact mobility is a complex process. The various sources of statistical material which are quoted use somewhat different definitions but generally in this Report the term is used to mean the employment in new establishments, whether sited in new or existing premises, which results from the transfer of operations from one location to another or from the opening of an additional establishment (or branch). It also includes any subsequent growth of employment in the new establishment.

2.39 Growth of manufacturing employment in the region in the early 1960s was less than it would have been had the region followed national trends. An analysis of national and regional employment change between 1961 and 1966 suggests that had employment in individual industries grown in line with national rates, employment in the South East would have increased at least by half as much again, as in fact it did. It is impossible to quantify precisely the extent to which movement of employment out of the region was a reason for this. However, in view of the fact that those industries which showed the greatest shortfall in growth were also those which generated most movement, it seems reasonable to assume that the slower than national rate of employment growth in certain industries, and overall within the region, represents an achievement for national distribution of industry policies aimed at steering employment growth to other regions. The Ministry of Technology inquiry demonstrated that the desire to expand output is the most important factor in bringing firms in the South East to consider movement, followed by the inadequacy of premises and labour supply difficulties. In choosing a new location, firms are predominantly influenced by labour availability; the availability of an industrial development certificate; Government inducements; local authority assistance; environmental factors; and accessibility to markets and supplies, to an existing plant or to the place from which they came. For moves with origins in the South East to destinations in non-assisted areas (i.e. including moves within the South East), labour availability; the availability of an idc; accessibility to an existing plant or location; accessibility to markets or supplies; and the availability of a non-Government factory (in that order) appear to be of most influence. These conclusions are borne out by other studies of relocation (e.g. relating to the West Midlands and to Scotland) and combine to underline the importance of labour as a key factor in determining where mobile employment resettles.

2.40 A regional strategy must offer scope for industry and commerce to operate as efficiently as possible. The factors that affect this change continually. Transport costs, for example, are generally less significant than they may have been in the past, though accessibility and communication in a wider sense are of significance. The work of Economic Consultants for the team seems to indicate that, provided a few basic requirements are fulfilled, and in particular a suitable labour force is available, most firms can operate in a number of different locations in the region without jeopardising their operational efficiency, although clearly the extent to which firms are efficient is largely dependent upon internal organisation and management. An examination of industrial linkage showed that linkages of various types (to suppliers and markets for example) are not as important within the South East as has often been suggested, although new types of linkages, for example organizational links within firms, may be growing in importance. Conventional linkages may however be important for smaller firms, though no survey information on this is available.

2.41 Economic Consultants Ltd carried out on the team's behalf a survey of all manufacturing units in the South East which employed more than 100 workers in 1968. It showed that movement has been extensive. Nearly half of the plants contacted had moved since 1945, although a large number of the moves were over short distances only. Twenty per cent were of less than one mile and 60 per cent were of less than 20 miles. The shorter distance moves were in or around existing centres of employment such as Portsmouth, Reading and Luton and above all, Greater London. Thirty per cent of all

moves ended in London, the bulk of them being resettlement within London. Over three-quarters of the moves in Inner London, and 60 per cent in Outer London, were to existing premises and over half the London moves did not require idcs, either initially or for subsequent expansion. Longer distance moves (usually with London as their origin) followed in general a sectoral pattern although there was considerable diversity of movement throughout the region. A study of the destinations involved demonstrated that much movement was explicable in terms of central or local government planning policies, including moves to new and expanded towns and to some other destinations (e.g. Portsmouth and NE Kent). There was of course widespread movement to other areas both within idc control (the bulk of idcs are granted) and outside it (moves to existing premises or to premises below certain floorspace limits are exempt). Movements of industry within and into the South East are shown in Figure 10 and 11.

2.42 The apparent flexibility suggested by these findings is emphasised by other work on the mobility of industry. A Board of Trade survey<sup>4</sup> of the movement of manufacturing industry 1945-65, covering moves of on average 20 miles or more, showed that within the South East there had been extensive movement to the northern parts of the OMA and to the southern parts of the OSE. This movement stemmed in large measure from London, and about a half in the period 1960-1965 consisted of moves to New Towns, with the remainder going to destinations widely scattered throughout the region. This survey also showed that the South East generated almost 50 per cent of all national employment in moves in the period 1945-65 with the proportion rising from 42 per cent in 1945-51 to 57 per cent in 1960-65 though fluctuating considerably over the period. Twenty seven per cent of the total mobile employment settled in the South East.

2.43 The very extensive short and medium distance employment movement described above is most important for regional planning. The existence of such mobile employment, however, does not necessarily mean that it is 'available' to support strategic planning policies. Many firms are small, with limited financial resources; others have local connections of importance to them; others again can only afford to move into premises left empty by someone else, where the rent is low. Firms' decisions on relocation are affected by a variety of factors which all combine to produce a very complex pattern of movement.

2.44 In the case of offices the factors are even less clear although many of them seem to be similar to those affecting manufacturing industry. The decision to move is likely to be stimulated by pressure on space, or inadequate premises, and the ready availability of premises has in the past had a strong influence on the new location chosen. However, office control has been in operation for a relatively short period, movement has been predominantly over short distances and in the future it seems likely that staff availability will play a greater role in relation to office relocation decision-making. The destination of office moves in the South East is shown in Figures 8 and 9.

2.45 It is clear however that unless the regional strategy offers to employers the type of facilities they need—labour or premises or both—movement to many locations which are not consistent with a preferred strategy will be difficult to resist. On the other hand, where employers' requirements and planning objectives are compatible and complementary, the chances of implementing a regional strategy are increased.

2.46 Economic Consultants, in a detailed labour survey of manufacturing firms which had moved, showed that there were significant differences in the extent to which 'higher-level' staff (managerial, skilled) and 'lower-level' staff (clerical, semi-skilled, unskilled) moved with firms or were recruited in the new location. This also varied according to the type of move (branch or transfer), and the distance moved (see Table 2.11 below) as well as in relation to specific locational factors (New Towns showed high proportions of workers moving with employment). Turnover rates in new locations varied by type of staff rather than by distance or destination of the employment move, and recruitment problems also varied by type of staff and by type of destination with more firms having recruitment difficulties in small towns than in larger centres.

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4. R. S. Howard. 'The Movement of Manufacturing Industry in the UK 1945-65' pub. HMSO 1968.

Table 2.11: Mobile Industry within the South East (1945–68).

## Transfer of Employees by Distance and Type of Employee

Distance moved in miles	% "High level" <sup>1</sup> to transfer with firm	% "Low level" <sup>2</sup> to transfer with firm	% all staff to transfer with firm
5–10	88	61	75
11–20	85	55	68
21–40	69	29	41
41–60	55	18	30
61+	64	8	14
Total	70	33	43

Source: Report of Economic Consultants Ltd

1. "High level" staff includes managers, supervisors, scientists, technologists and skilled production workers.

2. "Low level" staff includes clerical, office, semi-skilled and unskilled production workers.

2.47 This analysis has two implications for the regional strategy. First, there would seem to be little difficulty in attracting firms to most parts of the South East, provided that the areas in question are attractive to staff and it can be demonstrated to employers that suitable labour will be available. Second, labour problems for individual firms are minimised when movement is either over fairly short distances or to large rather than small centres. Short-distance movement is advantageous in so far as it facilitates the movement of workers with their firms: large concentrations are likely to be advantageous in that they encourage the development of specialist functions, producing economies of scale in the use of manpower and facilities.

2.48 The evidence available relates mainly to manufacturing industries. There is, for example, little evidence on changes in warehousing location although it is known that decentralisation of wholesale warehousing has been taking place. It seems reasonable, however, to assume that many similar issues arise in relation to the location of office jobs in particular and to a wide range of other economic activities. Large centres seem to have advantages common to most types of activity.

## Projections

2.49 It might be thought that population and employment figures for regional planning can be forecast relatively easily and can be regarded as reasonably firm. Theoretically they can be obtained by projecting employment levels and calculating population, on the assumption that employment opportunities are probably the decisive factor in population growth or decline. An attempt was in fact made to project forward employment in the region (that is, numbers of jobs). Various methods were tried but they resulted in a wide range of employment figures (from 9.3 million to nearly 10.75 million jobs in 1981). The same difficulty arises over population projections prepared by the Government Actuary's Department, in consultation with the General Register Office. These are made in the light of assumptions about birth and death rates and of assumptions about migration flows. Inevitably they also reflect expected employment opportunities since the assumptions about inter-regional migration concern both people and jobs. Since many of the assumptions change with the passage of time it becomes quite impossible to forecast population and employment levels with any certainty well into the future.



2.50 The team therefore decided to use "design figures". These, it must be stressed, do not represent either target populations for the region or firm forecasts which are likely to remain unchallenged. They indicate, on the basis of the best information available at present, the general level of population that plans should be designed to accommodate. In view of the impossibility of making accurate forecasts over a long period, plans must be flexible enough to cope with unforeseen changes.

2.51 The design figures are in line with current population projections, which assume a slight but increasing net outflow of population from the South East, and are within the range suggested by the employment projections, which assumed a continuation of present Government policies (see paragraph 2.3). The figures adopted by the team were:-

1981	18.6 millions
1991	20.0 millions
2001	21.5 millions

and these are illustrated in figure 4.

2.52 The numbers of economically active in the region over the next decade can however be assessed more accurately on the basis of birth rates in the recent past. Between 1966 and 1981 the national labour force is expected to increase at a much lower rate than in the preceding period and on the assumption that the broad relationship between national and South East activity rates will be maintained—that is to say South East rates will remain higher than national rates the increase in workers available for employment in the South East will be about 325,000, or rather more than half the increase that occurred between 1961 and 1966. This indicates the possibility of a regional labour shortage in the early 1970s (which the raising of the school leaving age will also affect). In this labour shortage period, which will not be peculiar to the South East, there may well be rapid strides in technological development and automation that would reduce labour demands, although it may also mean that shift working will increase in importance. In the late 1970s and the 1980s there will however be a rapid rise in the number of workers once the increased birth rates in the late 1950s and early 1960s are reflected in the labour force. There could then be substantial opportunities for growth in output depending on world trading conditions. Alternatively there could be problems and perhaps there will be a rapid move towards a shorter working week. There are thus many imponderables quite apart from the level of population.

2.53 The distribution of population within the region assumed by the team at 1981 is based largely on development plans and other planning commitments, and can be summarised as a reduction to 7.3 millions for Greater London, an increase to 6.2 millions for the OMA, and an increase to just under 5.2 millions for the OSE (see Chapter 7).

2.54 The probability of a continuing severe shortage of labour especially in Greater London may well lead to substantial increases in journeys to work across the Greater London boundary or to increased outward movement of firms if the labour needed is available in other locations. Lengthy journeys to work are accepted because they allow a wider choice of homes and living environment at one end and a wider selection of employment opportunities at the other. Against this must be set not only the cost to the individual, in time and money, of frequently uncomfortable and tiring journeys, but also the cost to the community, especially of congestion. In the case of commuting to Central London from outside London an increase in the numbers involved is expected. In the case of journeys to work into the rest of London, where the employment centres are dispersed, the journey to work pattern is consequently complex. A higher proportion of journeys to work, are made by car, and this causes traffic difficulties over wide areas. Some reinforcement of the push and pull factors influencing relocation may be required if these difficulties are to be reduced. At the same time however, it will continue to be important to maintain a balance between employment in services and manufacturing industries both in London and in other employment centres.

2.55 For these various reasons the team concluded that an objective of the regional plan should be to stimulate, as appropriate, the mobility of employment within the region and to encourage in particular, the further dispersal from London of employment, in both manufacturing and service industries, which can be located satisfactorily elsewhere. It is believed there is considerable scope for such continued decentralisation without jeopardizing industrial growth or efficiency. The benefits which stem from large concentrations of industry are not confined to London.

2.56 On the other hand, as has already been pointed out, the role of Central London as a national and international centre for administration, finance, commerce and tourism is of considerable importance to the national economy, and consequently an objective of the regional plan should be to provide scope for the expansion of this specialised role. It is recognised that difficulties arise in distinguishing between activities which are essential to this role and those which are not, and also that these activities may change over time. Nonetheless increased specialisation of employment at the centre, coupled with the need to improve living conditions, community facilities and the environment generally for those who necessarily live in or near the centre (see Chapter 3), mean that those activities that are not essential to the specialised role of Greater London must be reduced. These considerations reinforce the need for further decentralisation of manufacturing industry and of some office employment from the centre.

### Summary and Conclusions

2.57 The South East has a large population and a buoyant economic structure. Within the region, Greater London has been losing population but the number of jobs it provides has marginally increased; the OMA has been gaining rapidly in both population and jobs but its rate of growth has begun to decline; the OSE has been gaining both population and jobs and the rate has begun to increase. The characteristics of employment in Greater London have been changing as office growth in the centre has tended to counterbalance declines in manufacturing industry.

2.58 Movement of manufacturing employment has been extensive and it would appear that most firms can in fact operate efficiently in a number of different locations within the South East given appropriate facilities. The constraints, however, are the adequacy of the labour force and many personal, social and economic ties that are difficult to disentangle. Experience in the past indicates that some firms are willing to move over a considerable distance but a large number have moved over short distances only.

2.59 With a changing population composition shortages of labour may increase in the 1970s but a more rapid increase in the labour force will occur in the 1980s. The team's work points towards the advantages for both workers and employers in large concentrations, provided the dangers of over-concentration are avoided.

2.60 The objectives for the regional strategy arising from this analysis of the South East's population and employment problems may be summarised as follows:-

- i. to be sufficiently flexible to allow for changes either up or down in the level of population and employment in the region;
- ii. to enable the best use to be made of the region's labour resources and provide for an efficient distribution of employment within the region;
- iii. to match as far as possible population and employment growth;
- iv. to stimulate, as appropriate, the mobility of employment within the region and to encourage in particular the further dispersal from London of employment in both manufacturing and service industries which can be located satisfactorily elsewhere; and
- v. to provide scope for the expansion of the specialised role of Central London as a national and international centre for administration, finance, commerce, tourism and culture.

3.1 Conversion of population design figures into numbers of households and of households into numbers of homes required is an essential but mechanical task in land use planning. The results of a wholly mechanistic approach can, moreover, be misleading, as is explained later on (see paragraph 3.17 et seq). For a more realistic assessment of housing need it is important also to consider the ways in which living standards and the structure of society are changing and the effects these changes may have both on people's expectations and on their requirements. This the team attempted. In the course of its study the team paid particular attention to Greater London, where most of the region's social and housing problems are to be found. London needs large numbers of workers to function effectively in the national and regional interest (see Chapter 2). A regional strategy must seek to ensure that an economically healthy London does not place heavy penalties on these workers, such as poor housing and bad environment. The latter part of this chapter reflects this concern.

#### Society as a Whole

3.2 If the national economy grows in line with past trends, average real incomes may double over the next 20 or 30 years. The precise rate of growth is not, in this context, important. Whether the rate of growth achieved is higher or lower than the post-war average, and assuming that the relative shares of wealth and income by different sections of the population do not change fundamentally, the broad mass of the British people will almost certainly, by the year 2000, have incomes which are today enjoyed by only a relatively small proportion of the population.

3.3 It would however be a mistake to assume that broad patterns of expenditure will take radically new forms. Past experience seems the best pointer to the ways in which consumers' extra income will be spent. The values and expectations of the presently prosperous few are likely to be adopted by the newly prosperous many. Thus, it seems, more cars and household equipment of all kinds will be bought, and recreational demands will change as more people use cars to reach the countryside and coast at week-ends and on holidays and as more can afford to take up recreations such as golf and sailing. The demand for education, represented by the numbers seeking full-time higher education, will almost certainly continue to rise. Many people may be willing to spend more to buy more living space.

3.4 The consequential changes in behaviour patterns will probably be equally undramatic. It has been argued that the sense of local community will greatly diminish if not disappear as car ownership spreads, to be replaced by much more diffuse social relationships. This, however, remains unproven. In the Community Attitudes Survey commissioned by the Royal Commission on Local Government<sup>1</sup> it was found that about two thirds of those covered in the survey had either lived in their home (municipal ward or country parish) area all their lives or had moved to it from no more than 10 miles away. Two thirds were employed within the local authority area in which they lived. Other evidence available to the team suggests that, although the time spent on journeys to work is gradually increasing, this is usually resented, whatever the benefits in the way of wider choice of jobs, home and environment. In general people appear to be becoming more home centred, not less, and social activity is generally restricted spatially. Thus the evidence available to the team indicates that changes in social behaviour to the end of the century may be much less revolutionary than has sometimes been supposed. This is not, of course, to deny the possibility of significant changes for specific groups of people.

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1. Research Study No. 9, pub HMSO 1969.



3.5 Those who have incomes sufficient to enable them to exercise a fairly wide choice of homes and environment are likely to increase the already substantial demand for homes with gardens. This demand, together with the need to improve standards of urban open space provision and to accommodate more roads, schools with larger sites and playing fields, and recreational facilities generally, will increase the pressure for overall densities of urban development to be reduced. The average existing density of residential areas, excluding from the calculation schools, factories, parks and other non-residential land uses, is 51 persons or about 16 dwellings per acre in county boroughs, and this reduces progressively with the size of town. The first generation New Towns in the South East were planned on the basis of residential densities of 33 persons or about 10 dwellings per acre and 25 persons or about eight dwellings per acre has been proposed by the planning consultants to Milton Keynes. This illustrates the growing demand for space, particularly outside London, as people move from high density houses without gardens to the more spacious layouts first experienced in the suburbs.

3.6 On the other hand, as young people seek independence at an earlier age and as the proportion of old people in the population increases up to the 1980s, there may well be a growing need for one and two bedroom dwellings conveniently placed in relation to town centres. In the case of the elderly in particular, meeting this need may reduce the problem of under-occupation of large dwellings and to some extent counter the trend towards increased suburbanisation. Also, the rising price of land may lead to smaller plots for houses and hence to higher residential densities in some areas.

3.7 To meet the needs of the future it seems clear that the regional strategy must suggest broad areas for development to provide for (a) expected population increases and changes in household sizes; (b) a wide variety of housing requirements by all sections of the community; and (c) improved environmental standards in both new developments and existing urban areas.

#### Occupational Groups

3.8 Housing demand varies between different groups or categories in society. The old, the unmarried adults, the rich and the poor, all have different demands and expectations for living space and environmental quality. As a basis for the examination of this demand, the team decided to use the occupational structure, rather than income, for two main reasons.

3.9 First, for most people jobs determine the level and pattern of income over a lifetime. Although, for example, some manual workers may earn wages similar to certain white collar workers early in their working lives, the level of earnings of the white collar worker tends to increase with age, whereas for the manual worker it tends to be relatively stable. One effect of this is on their respective opportunities to obtain mortgages. Second, the level of expectations and pattern of spending tends in the majority of cases to be related to occupation rather than to income even when income differentials between different parts of the occupational structure are reduced. Obviously some groups, notably those not in full-time employment, are not included in the occupational structure, and local authorities will have to take account of this minority, but generally it is thought that the numbers excluded do not seriously distort the picture.

3.10 For the purpose of this study, it was necessary to group occupations to illustrate the main contrasts. The occupational groupings defined by the former Ministry of Labour were therefore amalgamated into three categories which, for the sake of convenience in subsequent description, were termed "the senior salariat", "the middle mass" and the "less privileged".<sup>2</sup> A projection of these

2. For these occupational groupings see the Ministry of Labour's "Manpower Studies" number 6, "OCCUPATIONAL CHANGES 1951-1961". The groupings were:

Occupational group	1: Proprietors, managers, administrative and executive staff	Senior Salariat
"	3: Professional and technical occupations (higher)	
"	2: Clerical and allied occupations	
"	4: Professional and technical occupations (Lower)	Middle Mass
"	5: Skilled manual occupations	
"	6: Semi-skilled manual occupations	Less privileged
"	7: Labourers and unskilled occupations	

groupings to the end of the century indicated that they might very roughly comprise respectively a quarter, a half and a quarter of the total working population as against the 1961 percentages of 16, 44 and 40 respectively. The projection was based on trends between 1951 and 1961. In general there have been no marked changes in the occupational structure since the beginning of the century but there are signs that recently developing changes are likely to continue at an increasing rate so that the structure at the end of the century will differ quite substantially from that in 1951 (see Figure 14).

3.11 Even with these changes in the occupational structure, the less privileged will still form a substantial minority in the year 2000. In London alone, unskilled and semi-skilled workers and their families may number between 1.5 and 2 million. All groups will have a higher standard of living than they do now but there is some danger that the gap between the groups, at least between the lowest group and the rest, who may be termed the affluent, will not necessarily have narrowed unless measures are taken to that end.

### The Senior Salariat

3.12 The "senior salariat" will, as a result of longer full-time education and increasingly sophisticated training methods, have knowledge and skills which will be increasingly in demand nationally and internationally, but competition for the highest rewards may be severe. They will almost certainly work longer hours than the "middle-mass", some of them perhaps at home and at week-ends, and some of this group may find their job security decreasing when they approach middle age as the rate of technological innovation accelerates. If the role of Central London as an administrative, financial and commercial centre is enhanced (see Chapter 2), the proportion of this upper occupational group in the South East's population will probably continue to be higher than elsewhere in the country. Their housing demands may be of three principal kinds.

3.13 The majority will probably live, as now, in the suburbs but a significant proportion, including some of the most successful, may opt to live in the quieter and more attractive parts of the region. Some will undoubtedly be prepared (as many of them are now) to commute lengthy distances back and forth to work daily and some may require *pieds-a-terre* in London. Areas of landscape value and with good recreational facilities may, therefore, come under increasing pressure both for new construction and for conversion to residential use of farm buildings and other properties of character. Such development for the long distance commuter, if carefully controlled, need not conflict with the countryside policies recommended by the team (see Chapter 4), but it will need to be planned in a positive way. Others may prefer to live near the centre of London, near to their jobs and near to the cultural facilities of the capital. Their need for periods of peace and relaxation may be satisfied by second homes of which there are already some 40,000 in the South-East (including Central London *pieds-a-terre*). Increasingly these are likely to be sought outside the region and perhaps abroad. Re-colonization of family housing in certain parts of Inner London, as has recently occurred in Camden and Islington, to augment traditionally fashionable areas such as Hampstead and Blackheath, will exert further pressure on the housing stock available near the centre for the less privileged members of society.

### The Middle Mass

3.14 The "middle mass" is, by contrast, likely to work somewhat shorter hours, and perhaps, for some, there will be a four-day week, although this may involve shift working in industry and in automated offices, to secure the maximum return from expensive plant. Unlike the upper occupational groups, many members of the "middle mass" at present find their choice of home severely constrained by price. Although average incomes in the South East are higher than in other parts of the country, they are not high enough to off-set higher house prices, which rose steadily due to the seller's

market in owner-occupied housing throughout most of the 1960s. The average price of houses bought in the South East in 1967 was almost three times as high as the average income of those who bought them, a ratio which was significantly greater than in other parts of the country. Mortgages have therefore tended to be more difficult to obtain, particularly in London. Young people at the beginning of their working life have thus greater difficulties in house purchase than in the rest of England and Wales, and the difficulties in London have led to many London workers living in the Outer Metropolitan Area (see Chapter 2), where there is a better environment and the costs of housing are generally lower.

3.15 It may be that some who live outside London do so reluctantly and would, if this were possible in future, prefer to buy a home in London. On the other hand, as living standards rise, more "middle mass" households will opt for the house-and-garden style of life even if this means, for those who work in Central London, commuting appreciable distances with the costs in time and money this involves. In such a broad cross-section of society the variety in styles of life, if not of income level, will be wide and those most closely associated with the upper occupational groups by the type of work they do will be acutely aware of the opportunities and facilities offered in their home areas, particularly for education and also for local recreation. To satisfy their demands, it seems probable that property developers will be increasingly obliged to pay more attention to landscaping and to good design generally, and to provide facilities such as play areas as part of their estates.

### The Less Privileged

3.16 The third occupational group, the semi-skilled and the unskilled, have in some respects shared and will no doubt continue to share in Britain's improved standards of living and not all of them are less privileged in pay although they may be less privileged in other respects. Manual work, in which many are employed has become lighter, as mechanical aids have been more widely introduced. Holidays are longer and working conditions are better than before the Second World War. Social policies have substantially reduced the costs to the individual of education and of health services. The increased provision of local authority housing, the spread of rent rebate schemes to aid poorer tenants in the public sector, and legislation controlling rents in the private sector have all helped to improve the housing conditions of the less privileged. Nevertheless, there are still severe local problems associated with housing shortage and bad housing; particular problems for certain sections within this occupational group, notably the coloured population and the low paid; and problems of social mobility (i.e. the amount of movement between the different levels of the occupational structure).

### Housing in the Region

3.17 Many of the problems of the less privileged are associated with housing and with London. However, it is first necessary to review the general housing situation in the region and changes which are likely in the future. The South East has a serious shortage of houses. Put in its simplest form, there were 164,000 more potential private households<sup>3</sup> than dwellings in the region in 1966. The calculation cannot be described as precise, since not all potential households may want separate dwellings while, on the other hand, some groups of people not classified as households may do so. Any realistic assessment of the housing shortage must include an allowance for a vacancy reserve for changes of occupancy and for repairs and conversions (the team has assumed the figure should be 4.5 per cent of households at any one time: on this basis the reserve should have been 243,000 dwellings in 1966). It must also allow for second homes, *pieds-a-terre* in London and country or sea-side cottages (of which there were in all, as previously stated, 40,000 in the region in 1966). The true extent of the present problem can, however, only be gauged if the number of unfit dwellings in the region (260,000 in 1966) is allowed for. Taking all these factors into account, there was altogether a shortage in 1966 of

3. The team has defined potential private households as families and one-person households lacking structurally separate accommodation.

just over 700,000 dwellings in the South East, which may be compared with a total stock of rather fewer than 5.5 million dwellings (see Figure 15).

3.18 Regional figures such as these conceal the concentration of the housing problem, both quantitatively and qualitatively, in London, and to a lesser extent in a number of the region's largest towns: over 70 per cent of the total regional shortage of about 700,000 dwellings was in London in 1966. The concentration of employment opportunities of all kinds in the capital has placed severe pressure on the housing stock and on the environment, especially in Inner London. This has tended to speed up the decay associated with an ageing infrastructure.

3.19 There were 164,000 more potential households than dwellings in the region in 1966, but in London the deficit was 243,000; the rest of the region had a crude surplus. In other respects also London's housing compares unfavourably with the rest of the region and with national averages. Proportionately fewer households in the South East lived in overcrowded conditions (taken for this purpose as more than 1.5 persons per habitable room) than in the country as a whole, but the proportion in London (2.4 per cent of households in 1966) was twice the national average. Similarly, proportionately fewer households in the region lacked exclusive use of the three basic amenities (a hot water system, fixed bath and inside sanitation) than in England and Wales, but over one third of London's households, nearly seven per cent more than the national average, were in this position. The London figures in turn conceal the concentration of the housing problem in Inner London, which contains a large part of the capital's older dwellings (seven per cent of London's housing stock was built before 1875) and of its poor and unfit houses.

3.20 There appears to be a correlation between areas where the proportion of households who share premises, are overcrowded and lack exclusive use of the three basic amenities is high, and areas in which a high proportion of households occupy privately rented accommodation. Apart from luxury flats, there has been comparatively little building to rent privately in the last 30 years, and accordingly many privately rented dwellings are becoming obsolete. Although redevelopment and sales to sitting tenants have made a marked reduction in the number of privately rented premises in recent years, the privately rented sector still provided homes for over 37 per cent of the households in London in 1966. The proportion is higher in Inner London where there is also a high proportion of the low paid (see paragraph 3.25 below). Building by local authorities did not start on a significant scale until after the First World War and although local authority dwellings now provide homes for over a fifth of London's households, their relatively recent construction means that they are largely free from the problems of obsolescence.

3.21 The prospect of overcoming the housing shortage by 1981 seems reasonably good over most of the region but in London a serious shortage may persist. The number of potential private households requiring a dwelling may decline by 200,000 to a total of 2.5 million in 1981. However slum clearance and other forms of redevelopment could reduce the stock of houses by over 200,000 dwellings between 1966 and 1981 and the demand for *pieds-a-terre* may increase significantly. By projecting forward housing supply on a variety of assumptions the team has calculated that a housing deficiency of up to 100,000 dwellings will persist in London beyond 1981. Housing needs are of course much greater in Inner than in Outer London, and shortages in the inner areas might be relieved, in part at least, by increasing the housing stock in the outer areas.

3.22 In the rest of the region the team has calculated that the number of potential private households requiring a dwelling will rise by more than 750,000 to about 3.7 million in 1981. This will be due partly to the expected increase in the regional population and partly to the increased numbers of one-person households, widowed or single retired people and the increasingly independent young. At the same time slum clearance and other forms of urban redevelopment could reduce the total housing stock by almost 200,000 dwellings while the demand for second homes may increase substantially. Against this can be set the fact that the stock of dwellings has been increasing steadily in recent years and may reasonably be expected to go on rising in the long term, in spite of fluctuations in the

building rate. By projecting forward housing supply on a variety of assumptions the team has calculated that there could well be an end to housing shortage outside London well before 1981, and that there may indeed be a reasonable surplus. However, this may be off-set by the consequences of demographic changes between 1955 and 1964 which are likely to lead to a new wave of household formation in the late 1970s and early 1980s.

## Obsolescence

3.23 The number of unfit houses in the region in 1966 was 260,000 (see paragraph 3.17) and the rate of obsolescence is increasing partly because of the large numbers of houses built in the region in the middle and later years of the 19th century. Again, the problem is particularly acute in London, especially Inner London. The Greater London Council's 1967 Housing Survey showed that about 120,000 of the capital's total housing stock of some 2.4 million dwellings were then in poor structural condition or unfit. The Council have estimated that the total number which will have reached the end of their useful lives before 1981 is over 200,000 with a further 350,000 between 1981 and 1991 unless more active steps are taken to improve them. This, the provisions of the Housing Act, 1969, are specifically designed to facilitate but the extent to which the rate of obsolescence can in fact be curtailed must remain unknown until the potential of obsolescent dwellings for improvements can be ascertained and the effectiveness of the Housing Act can be assessed. Most of the adverse effects of obsolescence bear directly on the lowest occupational groups particularly because they are concentrated in Inner London.

## Housing and Low Incomes

3.24 The housing problem of the lower occupational groups, the less privileged, is often exacerbated by the problem of low pay. Regionally, these groups are more favourably placed in the matter of pay than equivalent groups elsewhere in the country. The South East has a significantly lower proportion of low paid workers in its labour force than Britain as a whole and a lower proportion than any other region. Only 11 per cent of men in full-time employment earned less than £17 per week in 1968, against a national average of 16 per cent. Such figures are nevertheless misleading. Although the low paid form a relatively small proportion of the South East's total labour force there are many more low paid workers in the region than in any other region simply because the work force is so large. Further, there is a high concentration of the low paid in London owing to the concentration there of service employment, in which the proportion of low-paid workers is high<sup>4</sup>.

3.25 Low pay is, moreover, of particular significance in London and especially in Inner London because of the high cost of housing. This high cost is due to a variety of factors, including the shortage of housing and the high cost of the land (£1,300 per new dwelling in 1968 compared with £300 in the rest of the country). Generally housing takes a higher proportion of income in London than elsewhere in the country, 12.5 per cent in 1968 against 10.1 per cent nationally (and 11.1 per cent in the rest of the South East), but the proportion spent by those with low incomes, who generally have the worst housing, is higher still and annually increasing. Thus in 1959 those with incomes under £8 per week in London spent 17.3 per cent of their expenditure on housing whereas in 1967 households with under £10 per week (the only comparable figure available) spent 23.2 per cent of their expenditure on housing. Thus, in some respects, the position of the less privileged in the South East's housing market appears to be deteriorating. Moreover, some members of this income group paid 32.2 per cent of expenditure in 1967 for privately rented, furnished accommodation yet it is in this sector that housing conditions are generally worse than in any other.

4. A good deal of information on the low-paid is available from the NEW EARNINGS SURVEY conducted by the Department of Employment and Productivity in 1967. However, the need for further information has been recognised and research grants have recently been given to projects at Edinburgh and Essex Universities. See SSRC Newsletter No. 8, March 1970.



3.26 The problem of high cost of housing in London also affects the elderly, who are another numerous group with low incomes. A significant proportion of the elderly require considerable assistance from public funds to obtain adequate housing. Since this group is probably the least mobile in the population, there is a particular need to provide appropriate accommodation for them in London (see paragraph 3.6).

3.27 There remains the problems of immigrants of New Commonwealth origin, who form a significant element in the less privileged group and who are concentrated, within the South East, in London, and within London, overwhelmingly in Inner London and a few outer boroughs. The team has estimated that in Greater London as a whole there were about 500,000 coloured residents in 1966, forming 6.5 per cent of the total population. There seems little doubt that these immigrants are concentrated at the lowest levels of the occupational structure. Over 95 per cent of Caribbean male workers, for example, were engaged in manual occupations in 1966 against a national average of under 65 per cent of the male labour force in such occupations. There is also some evidence that immigrant families as a whole receive somewhat lower income per capita than non-immigrant families. The housing conditions of coloured immigrants also tend to be worse than average. There was considerably more overcrowding, and also severe overcrowding, among them, particularly in the case of immigrants from the Caribbean, than among the rest of the population in Inner London in 1966 and, as already pointed out, the rate of overcrowding among all residents in London was well above the national average. It appears that the housing conditions of many immigrants has improved since 1961, especially since the numbers in the privately rented sector of the housing market, in which some of the worst overcrowding is found, have declined. Appreciable numbers moved into owner-occupied dwellings or into local authority housing over the period 1961–1966. As the total immigrant population substantially increased over the same period it might well be, however, that the number of immigrants in poor or bad accommodation is in fact substantially greater than in 1961, although the proportion may be less.

3.28 Thus, the broad regional picture, as has been repeatedly pointed out, is grossly misleading, since particularly intractable problems are posed by the concentration of the less privileged in Inner London, where conditions of housing, of the physical environment and of community facilities are in general poor.<sup>5</sup> Also the ability of some of the less privileged to cope is undermined by a combination of low pay and high costs. The demand for semi-skilled and unskilled workers to maintain and service the capital, to provide catering, cleaning and transport among other essential services, is moreover unlikely to diminish.

### Social Problems in Inner London

3.29 One consequence of this could be the social polarization of those who reside in Inner London, as a consequence of the “middle mass” leaving due to high costs and unacceptable living conditions. However there is no satisfactory definition of what is a “good” social mix of incomes and occupations. Further, there are two sides to the question. There is an obvious need to reduce the pressures on land use in Inner London to permit redevelopment, and to the extent that the population outflow contributes to this loosening up process it is not unwelcome. Also there are some advantages as well as disadvantages in residential concentration, particularly for immigrants. The ready accessibility of other immigrants gives support to newcomers in the difficult task of adjusting to a new society and it makes possible the provision of a range of services relevant to a group’s particular needs.

3.30 On the other hand, there is some danger that concentration may lead to an association being formed in the public mind between coloured population and poverty, and the absence of a particular social group may limit the range and quality of services and facilities available, especially educational services. This could affect opportunities for the less privileged. The issue is further complicated by the

5. This general conclusion has been reiterated by the Cullingworth Report on council housing which suggests that the housing problem in Inner London is “more acute and intractable” than elsewhere in the country: Ministry of Housing and Local Government and the Welsh Office “COUNCIL HOUSING: PURPOSES, PROCEEDINGS AND PRIORITIES”, pub HMSO 1969.

need to choose the area over which social mix or polarization is considered and by the need to distinguish between residential and occupational mix in any area. In the team's view it is more important to approach the question of society's structure not with a view in the first place to establishing a residential social mix of a particular kind in any particular locality but rather with a view to deciding how possibilities for mobility within the occupational structure may be opened to all.

3.31 It has already been pointed out that, if present trends persist, the proportion of the semi-skilled and the unskilled in the nation's labour force will decline. This suggests that some mobility within the occupational structure is being achieved. However, in the particular circumstances of Inner London, there is some evidence to the contrary. First, with the movement of expanding manufacturing industries out of both Inner and Outer London, taking with them a number of "middle mass" jobs, it appears that a gap is developing in the occupational structure, which will cumulatively restrict the job opportunities of the less privileged. Second, it appears that immigrant workers are making little progress in securing more diverse and better paid employment. Between 1961 and 1966 the proportion of coloured males in certain clerical occupations fell although the total number of males employed in these occupations increased. It seems the position may however have improved somewhat since 1966. By contrast more coloured women found employment in clerical occupations and, because of their acceptability in other occupations where labour is scarce, notably nursing, their position in the occupational structure is generally more favourable than that of their menfolk. The team's assessment of the position indicates that there is a need to decentralize as many semi-skilled and unskilled workers as are not required to maintain Inner London's essential functions to areas where the occupational structure provides more opportunities for advancement.

3.32 At the same time there is some evidence that Inner London's children are caught up in a cycle of deprivation, which leads to the replacement of the less privileged in one generation by their children. Unsatisfactory home conditions and a poor physical environment, amongst other factors, appear to affect adversely educational achievement. A recent survey of reading standards of eight-year-olds in Inner London showed that on average these were considerably lower than elsewhere and the difference was particularly marked in the case of children of immigrants and unskilled workers. Further it appears that although a large proportion of the regional population terminated their education at a minimum age, the proportion was particularly high in a limited number of areas, notably on Thames-side east of Central London. This points to the need for discrimination in school-building and similar programmes in favour of Inner London and perhaps to the need for extension and reinforcement of the Education Priority Area Scheme and the Urban Programme which already provide extra funds to improve the environment in the worst schools, and to help with education in the pre-school period.

3.33 The problems of the less privileged groups in Inner London are therefore many and not all are likely to be susceptible to policies appropriate at the local or regional level. Urban renewal is, however, a local matter and this will fall principally on the local authorities. The cost of such renewal, stemming from high land and construction costs in London, and the low rate of return, means that private enterprise may be expected to make only a limited contribution. It has already been argued that considerable national economic benefits are likely to accrue from the enhancement of Central London's functions both as an administrative, financial and commercial centre and as a centre for international tourism. It has also been argued that provision should be made for some high quality housing development in Inner London. If the pressure on land at the centre is not to increase, and the position of the less privileged is not to deteriorate, there is clearly a need to encourage or promote decentralisation from Inner London, so that redevelopment of obsolescent housing, modernisation of community facilities and improvement of the environment generally in Inner London may be undertaken.

3.34 In the past it has been largely the "middle mass" who have moved in the process of decentralisation of employment. The semi-skilled and unskilled have tended to be left behind. However, the amount of manufacturing employment in Inner London and evidence of the very extensive relocation in post-war years of such employment over short distances suggests that there may be potential for the

short-distance movement from Inner London of a number of semi-skilled and unskilled jobs. Movement over short distances would encourage workers to move with their jobs. Firms which have moved relatively short distances in the past have tended to keep a much higher proportion of their less-skilled labour force than firms moving over much longer distances. This will require appropriate housing development and allocation by local authorities in the reception areas, either in Outer London boroughs or beyond the Greater London boundary, and involves the redistribution of population and jobs inside London and the movement of jobs and people out of London. Since short-distance movement by both firms and people has occurred sectorally within and beyond London it may be possible to organize such movement in one or more sectors of London and the immediate periphery so that urban renewal and redevelopment of the inner end of the sector in Inner London can be co-ordinated with provision of housing and other facilities in the outer parts of the sector.

3.35 However, even if some decentralisation of the unskilled and semi-skilled takes place, there will still be a concentration of such workers in Inner London and it may be necessary to make special provision for certain groups by policies other than the physical renewal and redevelopment of the urban fabric. The long-term review of housing finance announced by Ministers in May 1969 will doubtless be important here; so too will the Urban Programme and Educational Priority Area schemes. It would, however, be appropriate for one objective of the regional plan to be to give to groups among the semi-skilled and unskilled workers remaining in Inner London and suffering from multiple disadvantages, an appropriate measure of priority—

- a. in housing and
- b. in additional provision of educational and occupational training facilities of all kinds.

3.36 Outside London there are clear advantages, not only for the less privileged but for all sections of society, in the creation of large rather than small centres, where a greater range of health, welfare and educational services and of job opportunities is likely to be available and where an adequate public transport system is likely to be provided.

### Summary and Conclusions

3.37 Whilst it seems likely that there may be no basic changes in living patterns to the end of the century, increasing affluence may result in a growing demand for lower overall densities of development and better environments generally. In the larger cities however, a contrary trend towards higher densities may result from the needs of one and two person households and from the demand for second homes. The housing shortage may well be over in the region outside London by 1981 although post-1981 the increasing rate of household formation may well be significant. London will probably still present problems due to increasing obsolescence of the housing stock and the high cost of housing, particularly for those with low incomes. The less privileged are likely to be further disadvantaged in Inner London by the relative lack of opportunities of various kinds unless steps are taken to counter these trends. Decentralization of those workers together with jobs which are not essential to the functioning of Central London and with special attention for those who must remain behind is therefore desirable. Outside London community facilities of all kinds are likely to be most satisfactorily provided in large and concentrated, rather than in small and dispersed growth areas.

3.38 To sum up, the team concluded that the aims of the regional plan relating to people and their homes should be—

- i. To suggest broad areas for development to provide for expected population increases and changes in household sizes; for a wide variety of housing requirements by all sections of the community; and for improved environmental standards in both new and existing urban areas.



In this connection it will be necessary to take into account demands for

- a. improved housing and community facilities in Inner London for the lower occupational groups who will need to remain there (see also objectives ii. and iii. following);
  - b. a substantial proportion of new housing development in the form of homes with gardens; and
  - c. some upper occupational group housing in Inner London and in certain small towns, villages and other settlements in the countryside where this does not conflict with countryside objectives.
- ii. To allow for the redevelopment of obsolescent housing, modernisation of community facilities and improvement of the environment generally in London.

To this end it will be necessary to ease the various pressures on land and facilities, which may be achieved by

- a. dispersal of employment not essential to the functioning of Inner London, and
  - b. provision for the movement not only of skilled but also of semi-skilled and unskilled workers with the employment which is dispersed.
- iii. To give an appropriate measure of priority in housing and in additional provision of educational and occupational training facilities of all kinds in areas where groups among the semi-skilled and unskilled workers remain in Inner London and suffer multiple disadvantages.
- iv. To promote the development of large centres generally throughout the South East to facilitate provision of a wide range of health, welfare and educational services, together with a wide range of job opportunities.

## CHAPTER 4

### TOWN AND COUNTRY

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4.1 In the 19th century industrialisation resulted in a rapid drift of population from the country to the towns. This drift, together with a rapidly increasing population, meant that towns, and above all London, grew rapidly. Whereas, before industrialisation, towns had served agricultural hinterlands as marketing and trading centres, after industrialisation many towns became predominantly centres of manufacturing industry, with only limited connection with nearby rural areas. There was little contact between the rural and urban sections of the population.

4.2 With the spread of railways and the advent of motor vehicles it became possible for large numbers of people to journey to work from rural into urban areas. Increased mobility has enabled the rural population to use towns for shopping, entertainment and other services. Conversely it has enabled urban populations to make more use of the countryside, particularly for recreation. Town and country have thus, once again, become interdependent and it is important to consider the problems of each in the context of the other.

4.3 The population of the South East in 1969 was 17.3 million, about 11 million of whom lived within a radius of 40 miles of Central London. By the end of the century another 5 million, approximately, may have to be accommodated within the region outside Greater London, i.e., the natural increase of the region's population together with an outflow from London. Provision for such additional population, assuming development at an overall urban density of 12 persons to the acre, would require a further 600–700 of the region's 10,500 square miles for urban development, which may be compared with the area of Greater London (620 square miles) and of the Metropolitan Green Belt (840 square miles). In addition, related forms of development such as roads, airports, electricity generating stations, overhead power lines and reservoirs will demand an increasing amount of land and will intrude visually over still wider areas of the countryside.

4.4 The existing settlement pattern must be the starting point for planning the further urbanisation required to accommodate the expected population increase. It consists of a range of settlements of varying sizes, some small and relatively self-contained, others forming large urban complexes. The latter very large areas of urbanisation include both large cities or towns surrounded by several small settlements, and looser groupings of related settlements. Such complexes provide a wide variety of employment and services with more specialised functions being carried out in a main centre or centres. In this report these complexes, together with the labour catchment areas on which they draw and the countryside which is directly associated with them, are termed city regions. The London metropolitan region, which comprises a number of potential city regions as well as Greater London, is of course the over-riding element in the structure of the South East.

#### The Metropolitan Region

4.5 The area of London's metropolitan influence includes a large number of settlements well beyond Greater London's boundary which have close relationships with London, some direct and some indirect. Directly London dominates them through its function as the region's most important employment, shopping and entertainment centre. Indirectly, a considerable part of the economic activity within these often large urban areas is dependent on Greater London.

4.6 The growth of London has posed a number of problems, the most familiar being congestion on both roads and railways, due in large measure to London's attractions as a labour market, and the continuing excess of demand for houses over supply, resulting in high costs of housing and services. The Government and local authorities have combined since 1945 to mitigate London's difficulties by encouraging the outward movement of population and employment. As a result of the success of this policy, together with voluntary migration, changes in household sizes and the lowering of residential densities, the population of London has steadily declined. However, a large part of the population outflow has settled just beyond the Metropolitan Green Belt and the numbers travelling long distances to work have increased. One consequence is that the area of metropolitan influence now covers a large part of the regions.

4.7 If, with an increasing population, the social, economic and environmental problems and costs of congestion are not to become features of the metropolitan region as a whole, it is clearly desirable to provide for an increasing proportion of the growth and outward movement of population and employment in settlements which are largely independent of London. Meanwhile it will be important to ensure that either the population level of the metropolitan region itself will be sufficient to provide an adequate labour force for the area to function efficiently or that employment does not increase beyond the labour resources available: that the potential city regions within the metropolitan region develop centres which provide a range of facilities and services complementary to those of Central London, thus reducing the proportion of the population who look to Central London for many facilities and services; and that the continuing problems of London itself are seen, and conditions created in which they may be solved, in the context of the metropolitan region as a whole.

4.8 The team's conclusion is that an objective of the regional strategy should be to provide for a settlement pattern which permits (a) the satisfactory evolution of the London metropolitan region, covering London's main labour catchment area, and (b) the growth of population and employment in centres outside the metropolitan region.

### Urban Concentration

4.9 Population and employment growth beyond that needed to maintain the prosperity of existing settlements might be provided for in a number of towns scattered throughout the South East region or it might be provided for primarily, but not exclusively, at a small number of large growth points. The team has examined studies of regions in Europe and America. Perhaps the main lesson to be drawn from these is that there are a number of advantages in concentrating rather than dispersing urban growth, a conclusion that is reinforced by many of the team's own analyses. In the employment field, for example, the concentration of employment and population produces large labour markets which allow and encourage the development of a labour force with diverse skills and which offer a wide variety of job opportunities (see Chapters 2 and 3). A further advantage is that for some industries a large industrial base is necessary for the development and survival of specialist sub-contracting and service activities. Socially, large centres are likely to offer a wider range of services than small towns, and this is of particular importance for the less privileged section of society. In transport terms, concentrated development facilitates provision of effective public transport systems and canalises inter-urban traffic flows. Finally, concentrated development, by restricting the impact of urban intrusion to a limited number of districts, allows for the preservation of extensive areas of open countryside.

4.10. The implications of concentrating growth into a few areas in the region have been examined by the team. Clearly there is a danger of repeating London's congestion problems in other large urban complexes, but it is possible to avoid these dangers provided plans are prepared to organise and structure large-scale expansion at an early stage. Concentrated development need not mean high density cities or continuous areas of urban sprawl. It should be related to the potential and needs of each area and might well consist of an integrated group of towns, each providing some specialised functions. In most cases areas suitable for concentration of growth are likely to be those already with considerable urbanisation and economic activity. The existing situation is therefore basic to the form of future growth, and the aim should be to assimilate growth with existing urbanisation so as to preserve good features of the environment and to achieve a cohesive pattern of development. Thus, concentration of development offers opportunities to develop city regions with many kinds of urban form and need not—indeed it should not—lead to any degree of uniformity throughout the region.

4.11. In the light of these considerations the team has concluded that an objective of the regional strategy should be to provide a settlement pattern in which development would, generally, be concentrated rather than dispersed and capable of supporting central place functions which, within the metropolitan region, would complement the attractions of Central London, and which, outside the metropolitan region, would be on a sufficient scale to enable the selected city regions to be largely self-contained.

### Small Settlements

4.12. Outside the main areas of urban development, building primarily for agricultural and other purposes concerned with the economy of the countryside will probably be insufficient for all towns and villages to maintain acceptable standards of social and economic welfare, especially if the farm labour force continues to decline (see paragraph 4.17). Many of these places will be capable of some further growth without harm to their character or that of their surroundings, although it is important that development should take place within a policy framework for a wider area.

4.13. Particular problems, however, may arise in towns and villages in areas where conservation is of great importance (see paragraph 4.29). Here, visual factors such as beauty of the surrounding landscape or of the village scene itself must normally be regarded as critical for decisions on the scale and character of development. It is no accident that most of the historically and architecturally interesting settlements which remain substantially intact are those which have been least subject to population growth and development generally. Some of these are now under great pressure for growth. However in areas losing population there are particular problems in finding new uses for old buildings and in pursuing positive conservation policies. Sometimes, therefore, a degree of expansion in harmony with their character and surroundings will be appropriate and would also meet the needs of people who prefer the environment of towns and villages to that of city regions. Private and local authority development can jointly play an important part in maintaining and rehabilitating old buildings, farms and woodlands, and, where this is appropriate, in extending small settlements or in creating new ones.

4.14. It therefore seems appropriate that another objective of the regional strategy should be to maintain the social and economic welfare of small settlements in the countryside, although this will require special care in areas of importance for conservation.

### Country

4.15. Up to the 19th century the siting of settlements was largely dictated by the physical character of the land. London was founded, at the lowest bridge point of the Thames, on "islands" of gravel because these were well drained, free from flooding and afforded a firm base for building. Only much later did settlement extend over the low-lying London Clay. The pattern of cultivated and uncultivated open space and woodland was similarly determined primarily by the nature of the soil. The physical character of the land continues to be of regional significance. Although the North and South Downs no longer offer effective barriers to the spread of London's influence, the ring formed by the Chilterns and the Berkshire and Hampshire Downs still keeps distinct the peripheral areas of the region to the north and the west. Physical characteristics, however, no longer determine the pattern of urban development. Modern building and servicing techniques have made possible the spread of housing even on to the marshlands of the Thames estuary. Roads and railways have breached all physical obstacles, which, with land never exceeding 1,000 ft in height, were never perhaps very formidable.

4.16. The expansion of urban settlements can generally only take place at the expense of the countryside, but the countryside should not be regarded solely as a land reserve for this purpose. The countryside's other functions are no less responsive to the human and economic pressures—population growth, increasing prosperity, technological advance—which necessitate the extension of urban development. The countryside is a source of essential materials—food, minerals and water. It accommodates most of the region's natural heritage—pleasant scenery and the habitats of a wide range of animal and plant life, without which the environment would be immeasurably impoverished. It accommodates also much of the region's historic and architectural heritage, in the form of attractive settlements and individual dwellings. It offers scope for both active and passive forms of recreation. Thus it is an asset of permanent value to the community. In its study of countryside problems, the team has therefore been concerned first to relate the needs of urban growth and the countryside generally (and it has already been noted that concentration of growth in a limited number of city regions would allow extensive areas of open country to be preserved); second to provide for appropriate use and development of the countryside's resources, agriculture, minerals, natural and man-made heritage and recreation (and these are dealt with separately in the following sections of this chapter); third to devise a comprehensive countryside policy, recognising that many uses of the countryside are complementary and not in conflict with each other.

### Agriculture

4.17. Predominantly fertile soils and a mild climate, with the highest sunshine and lowest rainfall records in the country, make the South East favourable for agriculture, which occupies over 60 per

cent of the land surface, and particularly for arable farming, which occupies two thirds of the land in agricultural use. The region contributes significant proportions of the national output of fruit, hops, pigs and poultry as well as wheat and barley. Cereals account for half or more of the output by value of all counties in the region except Kent, rising to three-quarters of output in Oxfordshire, Berkshire, Hertfordshire and Hampshire. Thus the region's agriculture is naturally well-suited to meet the challenge of possible change in the political and economic context in which it must operate: it is also well fitted to adopt modern capital-intensive techniques. Farm sizes have been increasing and the number of agricultural workers has recently been dropping faster than in the rest of England. Meanwhile the proportion of commercially non-viable farms in the region is already lower than in England as a whole and, if present trends continue, the number of holdings may decline very significantly by the end of the century. Economically the farm of the future is likely to resemble a minor industrial complex and the old pattern of hedge, field and copse may be replaced, in some parts of the region, by extensive areas of bare cropland. Traditional methods of farming are, however, more likely to be retained near cities and towns, where holdings are fragmented by the spread of urban development, where there are likely to continue to be a number of part-time farmers (urban workers who supplement their incomes from the land) and where market gardens and nurseries will continue to serve the inhabitants of the urban areas. Even in those parts of the region where there is a trend towards larger field sizes, there will be a need for shelter belts of trees to protect the land and crops, and these may also be used to provide sites for picnics and camping.

4.18.A number of factors need to be taken into consideration in formulating an objective for agriculture in the region. Nationally, agricultural output contributes no more than three or four per cent of the country's gross domestic product; the acreage required to maintain a given level of production is decreasing, due to increases in productivity and adoption of capital-intensive farming methods; and, with modern equipment, areas of formerly unproductive land can be brought into effective use. On the other hand, agriculture offers significant opportunities for import saving (the broad objective of the Government's selective expansion programme, based upon maintenance of the recent rate of increase in the industry's productivity, is an additional net import saving of £160 m. a year by 1972-73); highly fertile land and land particularly suitable for certain crops are national assets which it would be improvident to waste (especially since the alternative to cultivation is for much of the countryside to become derelict); and agriculture, by providing an agreeable diversification of land use, is itself of considerable amenity value and appreciated as such by the urban population.

4.19.In the light of the considerations set out above, the team concluded that an objective for the regional strategy should be to identify those areas where conditions are particularly suitable for the further promotion of agricultural productivity and to provide for the protection of these areas from encroachment by inappropriate land uses. These areas will be especially suitable for achievement of a high level of productivity by virtue of their existing and prospective farm structure, productivity levels and specialisation; land quality; and immunity from present and foreseeable urban intrusion. In areas of agricultural importance (see Figure 16) preference should be given to development required by agriculture over, for example, the needs of other forms of development and recreation (although recreational uses of land need not be excluded, see paragraph 4.17). Building should, in general, be limited to that required for the predominant use, together with sufficient growth of towns and other settlements, to which the agricultural community look for certain services, to meet their social and economic needs (see paragraphs 4.14, 4.15 and 4.16). In other parts of the countryside, where the land and farm structure is less well suited for capital-intensive farming than in the areas of major agricultural importance, the needs of agriculture would have to be met in the context of other competing needs for land, particularly recreation. It would be the task of the local planning authorities to reconcile conflicting claims and establish the amount of emphasis given to any particular use in any particular area, bearing in mind that generally agriculture should continue to be the main land use in the region.

## Minerals

4.20.The South East has a wide variety of mineral resources, including minerals of restricted occurrence and others, particularly those used in the construction industries, which are relatively wide-



spread. They range from the rare high grade silica sands (used in glass making and in the metallurgical industry) and Fuller's earth (which, because of its absorbent properties, has various specialised uses) to chalk (for making cement, for agriculture and for miscellaneous industrial purposes), clays (for brick production and, with chalk, for cement manufacture), and sand and gravel (which are the only large-scale resources of aggregate in the region). Materials produced from these minerals are, in a number of cases, of more than regional importance. Although the South East's predominance in cement making has declined somewhat, with the opening of works elsewhere which use limestone as well as chalk as the main raw material, the region currently produces about 40 per cent of the country's cement (about half of this contributed by works in the Thames/Medway area). About one third of the country's brick output is from the South East and the region's production of over 2,000 million fletton bricks in 1968, mostly from the brickfields south of Bedford, amounted to nearly 70 per cent of England's production of flettons.

4.21. Problems inevitably arise over the extraction of minerals, because these are commonly found in districts of natural beauty (chalk and Wealden sand) or under good agricultural land (sand and gravel) and because the plant used for production of materials such as bricks and cement may affect a wide area, either visually or through atmospheric pollution. Except in the case of sand and gravel the problems of extraction and after use of workings can, however, generally be dealt with at local or sub-regional level. This is because the reserves of chalk and clays in the neighbourhood of existing works are believed to be adequate for the next generation and continued extraction thus poses no new or widespread threat to the countryside. (Deep chalk and clay workings however present particular problems for which no satisfactory solution has yet been found). In the case of the more valuable deposits, notably the high grade silica sands and Fuller's earth, workings are few and relatively small scale, and so affect a limited number of localities.

4.22. The main regional problem is associated with the extraction of sand and gravel (the main deposits are shown in Figure 17). As urban development has expanded, demand for sand and gravel has risen rapidly, outstripping each successive official forecast. In 1965, 80 million cubic yards were used in England and the current estimate is that by 1980 demand will have risen to 150 million cubic yards. Over the same period regional demand is likely to rise to nearly 70 million cubic yards. To date the South East has been able to satisfy internal demand very largely from its own deposits, which are widespread, and it is thought that there is likely to be sufficient land available to the industry to maintain supplies until about 1980. Thereafter, so far as can be foreseen, the supply is likely to fall short unless extraction is permitted on land of the highest agricultural and landscape quality. As internal supplies become increasingly depleted, current demands for marine-dredged aggregate are likely to intensify, but this source is unlikely wholly to make good the region's progressive deficiencies after 1980. The location of dredging areas is often dictated by dangers to navigation and underwater cables and by possible effects on coast erosion and fishing, although research into aspects of the latter two problems is being undertaken. Ultimately the problem of augmenting regional supplies in vast quantities must be faced, since the region's resources of sand and gravel are fast wasting assets and it would be prudent to examine urgently not only the possibility of using substitute materials but also the problems of importing aggregate into the region from other parts of the country. An important consideration is transport costs, although amenity problems in the exporting areas will need careful attention. Very large quarries, which themselves would tend to reduce costs, might be opened in other regions which are well provided with sources of natural dense aggregate, and linked with the South East by rail or sea-going bulk haulage services. If such quarries and transport links were brought into operation early enough (the 1980s), the region's expected deficiency of aggregate could be met and land of the highest agricultural and landscape value could be saved from spoliation. Vastly increased supplies of marine gravel and imports of aggregates from outside the region would necessitate the provision of suitable sites, at ports and railheads, for discharging, grading and stockpiling and for connections with the regional road and rail network to ensure quick and efficient distribution.

4.23. A related problem arises over the after-use of land from which sand and gravel have been extracted. Over 60 square miles may be worked to satisfy demand up to 1980 and it is important, in a



region as densely populated as the South East, that this land should not be left derelict. Where sand and gravel workings are dry, chiefly in areas of glacial or high level deposits (i.e. parts of Essex, Hertfordshire, Berkshire and Hampshire), the land can often be restored to agricultural use or to woodland, although the quality of the soil will probably for some time be less than before extraction. However, about two-thirds of existing supplies come from the region's river valleys where workings result in the formation of lagoons. With the demand for water for various forms of recreation increasing, it seems sensible to use suitable lagoons for water sports, as in the Lee Valley. In other areas, particularly near London, where there are waste disposal problems, the lagoons may be filled in, either with builders' rubble or other inorganic waste, and adapted for uses appropriate to the location. It would be of considerable benefit if some means were found to overcome the pollution problems posed by the use of organic domestic waste to fill wet workings: the rate of filling might then increase rapidly.

4.24. In view of the need to meet the demand for minerals, particularly for sand and gravel, the team concluded that an objective of the regional strategy should be to avoid sterilisation of mineral resources by other development and to allow, except where this is wholly incompatible with other countryside objectives, for the orderly extraction of minerals, especially those in short supply or of national significance. In the longer term, however, it will be impracticable to satisfy all demands without damaging conflicts with other countryside objectives and it is therefore desirable that alternative sources of aggregate should be given urgent consideration (see paragraph 4.22).

4.25. An important corollary of the presumption that minerals will be safeguarded and extraction permitted is the need for structure plans to provide

- (a) that the land is available at the right time for working (either through agreement with land owners or, if necessary, through the use of the mineral rights legislation currently proposed); and
- (b) that proper provision is made for after-use and for landscaping of abandoned pits.

The local authority working parties which have been set up to study the problem of demand and supply of sand and gravel in various parts of the region in consultation with the gravel industry and Government Departments might ensure that these plans are correlated regionally and appropriately phased.

## Water

4.26. Another function of the countryside is to serve as a gathering ground for water, and with demand rapidly increasing more storage reservoirs may be required after the mid-1970s. The various possible methods of meeting the forecast deficiency in the area to the north and east of London are discussed elsewhere (see Chapter 5). It seems likely that the demand for land in the region on this account may be small. However, it clearly should be an objective of the regional strategy to safeguard natural water resources in the region, both in quality and quantity, so that the scale on which water needs to be imported into the region is not increased.

## Conservation

4.27. The need to preserve and, where possible, enhance areas of fine landscape and of wildlife or botanical interest has long been recognised. Losses cannot usually be made good. The region contains nine Areas of Outstanding Natural Beauty and two more are under consideration. In addition development plans show areas defined locally as of great landscape value. The policy aim in both is the preservation and enhancement of fine landscape and its protection from inappropriate development. National and local nature reserves, sites of special scientific interest and specific areas, such as the New

Forest, covered by local Acts, are similarly safeguarded. In the case of man-made features, individual buildings of historic or architectural interest have for some long time been preserved by private or corporate action. More recently, the Civic Amenities Act, 1967, had made it a duty of local planning authorities to designate, as conservation areas, urban areas of special interest, where particular attention will be paid to preserving and improving existing appearance and individual character.

4.28. Following examination of these various features of the countryside, the conservation of the built and the natural environment has been considered comprehensively across the region. In many cases the areas in which particular features of interest occur are closely related, and may overlap, and the presence of a number of features together may reinforce the need for conservation of a broader area than concentration on individual features might indicate. The geological structure, for instance, determines not only local variations of scenery and the distribution of woodlands. It also influences the man-made environment through the use of local building materials for churches, manor houses and domestic buildings of all kinds in both town and country. Thus the built environment and attractive landscape often complement each other. For similar reasons sites of interest from the point of view of nature or scientific conservation are commonly located in areas of high landscape quality, because features which interest the naturalist and the geologist are generally associated with, and probably contribute to, the interest of the landscape. Further, it is desirable that nature conservation should be applied over wide areas of ecological value, not just in relation to individual sites. Over 83 miles of the region's 454 miles of coastline have been designated as of great scientific interest, and 73 miles of these are considered to be of national or international importance. The conservation of those parts of the coastline that remain unspoilt or which can be rehabilitated is therefore one of the most important matters for conservation policy in the countryside.

4.29. Because the region's natural and man-made heritage is finite, and because appreciation of the need for conservation is expected to increase as standards of education rise and the area of urban development expands, the team concluded that an objective of the regional strategy should be to allow for the conservation and enhancement of areas of high landscape value, including much of the coast line, and areas with features of natural, historic and architectural interest, especially where these are found in combination. Based on the factors listed above, and also taking account of remoteness from the likely impact of major population and employment growth, the team defined in broad terms a number of areas of importance from the point of view of conservation (see Figure 18). Although the preservation and improvement of the existing environment should be the over-riding policy aim in these areas, and large-scale urban and related development and noise generating uses should be prohibited, it will be possible for local structure plans to allow wide variations in the amount and type of development permitted. Sites of ecological and scientific interest should continue to be safeguarded. Elsewhere investment in recreational facilities, for example, would be appropriate, according to the ability of the landscape (open or wooded) to absorb such development, which would need to be carefully sited and designed, and especially if such investment would serve to relieve more remote and sensitive areas from pressures of various kinds. Outside the conservation areas, there would be many small areas containing pleasant scenery, many attractive villages and town centres with historic associations and individual character, as well as isolated buildings of architectural importance, and numerous habitats of special value for nature conservation. Their preservation and enhancement should continue to be treated as important from a regional, and in some instances national, point of view, and provision for this should be made in structure plans following the advice of the relevant conservation authorities.

## Recreation

4.30. Increases in population and prosperity will mean comparable increases in demand for outdoor recreational opportunities whether by the resident population or by holiday makers, and the wider spread of car ownership will enable increasing numbers to escape the noise, the polluted atmosphere

and the pressures of urban life. A recreational supply and demand balance sheet would be helpful in identifying present and future problems and in establishing priorities for investment, but adequate information in many fields is lacking and techniques for using such information as is available are not at an advanced stage of development. To help in assessing the situation, the team identified the main areas which are used for recreational activities, such as motoring, walking and picknicking, and compiled an inventory of outdoor recreational facilities, noting those areas which attract large numbers of people and where pressures are particularly heavy at peak periods (see Figure 19). Comparing this inventory with the present and possible future distribution of the population, it proved possible for the team to assess in general terms the relative discrepancy between supply and demand in various parts of the region. This assessment suggested that there is a critical deficiency in outdoor recreational provision not only in London but also immediately to the north and east of London. Clearly, however, there is scope for further studies towards an adequate recreational supply and demand balance sheet.

4.31. In the light of the assessment described above, and the observable pressure on all recreation facilities in the South East, whether sandy beaches, picnic grounds or pleasure-craft moorings, the team concluded that an objective of the regional strategy should be to provide more scope for open air recreation requiring extensive areas of land. This would mean giving priority to those parts of the region where such opportunities are at present limited and to the development of intensive recreational facilities particularly where these will divert pressures from parts of the countryside more sensitive to intrusion. One means would be the creation, using powers under the Countryside Act 1968, of a network of large regional country parks, related to the major growth areas, to satisfy a variety of recreational needs. Advantages of siting such parks close to urban areas would be to set a limit to urban development, and to divert pressures from the coast-line and from the more remote and sensitive countryside, parts of which, as discussed earlier, might be defined as areas of importance for conservation. Although an enlarged programme of investment in recreational facilities would seem essential, particularly in the areas of recreational deficiency, it need not be assumed that all or even most recreational facilities would be publicly provided. The need for flexibility to meet changes in habit and fashion points to the desirability of involving private enterprise and capital. Nor need the expense be high. Costs might be kept down by the dual use of certain facilities, for example school and university sports fields near urban areas, and reservoirs and woodlands in the countryside. Continued use of some of the land in a country park for agriculture would not be incompatible with use of some of the land for recreation. A varied landscape would add to the interest of the park; many recreation needs might be met on heaths, uncultivated commons and generally on agriculturally inferior land; and access to and movement within each park should be carefully controlled as one aspect of good management.

4.32. Just as the demands of the resident population in the region for recreation facilities will increase, so will the demands by holiday-makers. Each year at present, about 60 per cent of the adult population take a holiday<sup>1</sup> away from home. In the long-term this proportion is likely to rise as mobility, prosperity and leisure time all increase and, also to be taken into account, the population of Great Britain is expected to increase by about 25 per cent by the end of the century. Even if by the year 2000 the number of holidays spent abroad more than doubles (from about 5 million in 1968), the number of domestic holidays could, on a conservative estimate, increase by about 25 per cent above the 1968 figure. Meanwhile the number of visitors from overseas for holidays and all other purposes might increase to three times the 1968 total of 4.8 million. About three-quarters of all main domestic holidays include a stay by the sea, and it is not anticipated that this proportion will change substantially. However, according to the British Travel Association, about 90 per cent of holidays taken in this country by overseas visitors were wholly or in part spent in London and the South East. Their impact on the coast is believed to be negligible.

4.33. As the United Kingdom already earns nearly £300 million a year in foreign exchange from overseas visitors and tourism is expected to continue to grow, it is clearly essential in the national economic interest that adequate provision should be made for foreign visitors. In the South East this is

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1. A holiday is defined as four or more consecutive nights spent away from home mainly for leisure purposes.

primarily a matter for Greater London (see Chapter 2) although it seems probable, especially if the Channel Tunnel is built, that more short visits will be made by foreign holiday-makers, perhaps primarily for shopping and sight-seeing purposes, to Kent and other areas readily accessible from cross-Channel routes. Outside Greater London, the pressure from domestic holiday-makers will reinforce that exerted by the region's resident population, especially on the coast. To contain this further pressure, and to stimulate holiday-making in regions less economically diversified than the South East, national policy might aim at spreading tourist development so that the South East maintains but does not exceed its present proportion (30 per cent) of the total British holiday market.

## General

4.34. The separate analyses of the resources and uses of the region's countryside and the rapidly increasing demands on them point to the need for as much care in planning the future of the countryside in the South East as has, to date, been given to the urban areas. The analyses suggested a number of objectives for the regional strategy.

4.35. For those uses<sup>a</sup> primarily concerned with exploitation of the countryside's resources for essential materials, these objectives were

- i. to provide for the protection of areas where conditions are particularly suitable for the further promotion of agricultural productivity from inappropriate development;
- ii. to avoid sterilisation of minerals by other development and to allow, except where this is wholly incompatible with other countryside objectives, for the orderly extraction of minerals, especially those in short supply or of national significance; and
- iii. to safeguard water resources, both in quantity and quality.

4.36. For those uses concerned primarily with the enjoyment of the countryside as it is, the objectives were

- i. to allow for the conservation and enhancement of areas of high landscape value, including much of the coast line and areas with features of natural, historic and architectural interest, especially where these are found in combination; and
- ii. to provide more scope for open air recreation requiring extensive areas of land.

4.37. As has been pointed out, the various uses of the countryside are not, if carefully controlled, necessarily incompatible with one another. Although the existence of mineral resources in a particular area should be a bar to certain forms of development and mineral extraction is inevitably an exclusive use, once the minerals have been worked the land can be restored for a variety of uses (not excluding urban development). This makes the long-term designation of all parts of the region's countryside for particular uses both unnecessary and undesirable. Nevertheless, it is essential to have some order of priority for the various competing objectives set out above to guide local planning authorities in the preparation of structure plans for their areas and for day-to-day development control.

4.38. Region-wide priorities would be open to so many objections as to be of little worth: on the other hand, to suggest priorities at sub-regional or local level would involve regional planning in matters properly left to the local planning authorities. However, remoteness from urban development and intrusion is important both for maximising agricultural productivity and for conservation of broad areas of environmental significance. Further the ecological and structural changes which capital-intensive farming methods seem likely to bring about (or to require) may be too drastic to be readily acceptable in conservation areas. It therefore seemed reasonable for the team to define, in broad outline, areas of agricultural importance and of importance for conservation and to distinguish between them, and where there is an overlap to suggest that priority be given to conservation because the requirements of conservation are generally the most sensitive and least flexible. The exercise of

development control in these areas should be directed primarily to achieve the appropriate objective, although, as already indicated, one particular land use in them need not be exclusive. Design and siting of buildings will be of importance not only in conservation areas but also in the areas of agricultural importance.

4.39. In the countryside outside the areas of agricultural and conservation importance it would be for the local planning authorities in their structure plans to achieve the countryside objectives. Safeguarding and extraction of minerals should have priority where extraction is permissible; the need for comprehensive plans covering phasing and after-use has been stressed. Conventional forms of agriculture, conservation of the landscape and of the natural and man-made heritage; and country parks are uses which can and should be integrated. In general the policy should be to develop agriculture but not to give agricultural needs special priority where these compete with other appropriate countryside uses outside the areas of agricultural importance.

4.40. Inevitably uses of land in the countryside for development related primarily to the urban areas—such as roads, airports and power stations—will have to be accepted. In general these uses should be restricted in areas of importance for conservation or agriculture, and on land containing mineral resources, but if it is in the over-riding national interest to accommodate them, the greatest care should be given to siting, design and landscaping and if possible minerals should be worked before development goes ahead. Elsewhere these uses should be steered to those parts of the countryside most able to absorb them without disturbing other uses.

4.41. It follows from the foregoing that a general objective for the regional plan should be to derive the greatest possible benefit from the countryside of the South East as a whole. This will involve providing for appropriate development of recreational, water, mineral and agricultural and woodland resources; conservation of landscapes of high quality and of attractive towns and villages; and restriction of urban intrusion particularly in the remaining extensive areas of open countryside.

## Conclusions

4.42. The main conclusions drawn from the team's study of the related town and countryside issues for the regional strategy have been listed in the appropriate sections of this chapter. For urban development they may be summarised as provision for the expected increase in population and economic activity in the South East first by channelling growth in the London metropolitan region to a number of growth areas, taking pressure off Greater London itself, and second by channelling as much growth as possible to a limited number of relatively independent and compact city regions outside the London metropolitan region. For the countryside they may be summarised as the preservation from urban intrusion of existing large areas of open country and, within these, definition of certain areas of importance for the promotion of agricultural productivity and for the conservation of fine landscape and man-made heritage. Together, the policies suggested should provide a coherent structure both for urban growth and for full utilization of the countryside's resources.

## CHAPTER 5

### PUBLIC UTILITIES (WATER, DRAINAGE, FUEL AND POWER)

5.1 Projects at various stages of completion should suffice to maintain public utilities—water, drainage, energy supplies—over the next decade and in some cases for a longer period but thereafter a number of major schemes will be required both to meet steadily increasing demands as living standards rise and to provide for the expected increase in the region's population. These schemes will need sizeable amounts of land, but of greater significance is the time needed to plan and carry through major works. Up to 10 years may elapse between the inception of a project to augment the water



supply and the date when water first begins to flow. Thus careful co-ordination of urban development and the provision of public services is essential, especially in those parts of the region where serious deficiencies are forecast at an early date.

## Water

5.2 It is expected that the demand for water per head of the population will go on rising at the current rate. In a report published in 1966<sup>1</sup>, the Water Resources Board, using a regional population forecast somewhat higher than the team's design figure, estimated that the South East's total demand in the year 2000 might be nearly double the public water supply available in 1965. Domestic consumption alone is at present about 35 gallons per head per day. As more domestic appliances come into use, the trend in consumption is expected to continue upwards at a rate of two or three per cent a year. Some industrialists have their own "direct" supplies of water in addition to supplies obtained from water undertakings. In 1965 use of these direct supplies was about 165 million gallons per day. As more and more water is required for many purposes and in particular for cooling at power stations, industry's total consumption is conservatively expected to rise to nearly 400 million gallons per day by the end of the century. Agriculture too needs increasing quantities of water, notably for spray irrigation, but it is thought that most of this demand will be met by the provision of local surface storage.

5.3 On the basis of the proposals for the future of urban development contained in the South East Study, 1964, the Board forecast that five of the ten river authorities covering the South East and adjoining counties—East Suffolk and Norfolk; Kent (outside the limits of the Metropolitan Water Board); Sussex; Hampshire; and Avon and Dorset—should be able to meet demands from resources within their own areas until the year 2000. However, the other five—Weland and Nene; Great Ouse; Essex; Lee; and Thames—would need additional water from outside their areas, despite proposals for extensive re-use of water and for transfers of water between river authority areas (see Figure 20).

5.4 The estimated deficiency during the remainder of this century could be made good by conventional means—further exploitation of underground sources and additional surface storage reservoirs which would provide both direct supplies and also regulate river flows. Big new reservoirs would be of considerable local significance and might involve using land of good agricultural value, although the land requirement would be on a small scale in the regional context and might be reduced should artificial recharge of underground sources prove feasible on a large scale. Other possibilities are storage in the Wash; desalination, which the Board considered unlikely to play an important part in augmenting supplies before the 1980's because of the high cost of the installations needed; and importation from outside the region, perhaps from the Severn and the Wye. Any of these courses would entail some additional storage reservoirs in the region.

5.5 Whichever scheme, or combination of schemes, is eventually agreed, re-use of water, which offers great savings in both capital investment and land, will be a fundamental element in any development programme. Re-use makes it particularly important to ensure that proper levels of water purification are maintained and that the discharge of industrial and other effluent into the rivers is carefully controlled. The Board expect to publish a report on water distribution within the South East in 1972, taking account of the regional strategy.

5.6 Given the necessary expenditure and statutory powers to undertake works where these are needed, it seems that sufficient water supplies can be made available to meet the demands of regional development without material variation in cost. Re-use and pollution are however major problems and constant attention has to be paid to water quality.

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1. Water Supplies in South East England, HMSO 1966.



5.7 A quite separate problem arises from the liability of certain rivers to flooding. The Greater London Council were asked by the Government in May 1970 to recommend a precise site, between Woolwich Reach and Blackwall Reach, for a dropgate barrier to eliminate the risks to London's Thames-side from a combination of high water flows and tidal surges in the river's estuary. The maintenance of sea and river defences down river from the site selected will remain important on account of the extensive urban areas and industrial plants on land below high tide level. Elsewhere in the region the need is for more modest flood prevention measures on a local scale—the Thames Conservancy is presently investing some £7 million on these in its area—and for the allocation, where new development is proposed, of adequate areas of open land for washlands, flood relief channels and surface storage so that flows into the rivers can be controlled. In some areas which have been affected by floods in recent years, notably the Blackwater (Surrey) and Mole Valleys (the latter including Crawley and Gatwick), this will mean that possibly substantial areas of land will not be available for building, but such land might be used to create interesting open space systems. Surface water drainage problems in the South East are not therefore regarded as of sufficient magnitude to determine future patterns of regional development though they may be of some significance at the sub-regional level.

5.8 Similarly there are foul drainage problems in a number of areas, including the Thames, Lee, Stort and Blackwater (Surrey) Valleys, in South Hampshire and at Milton Keynes, but these also are not considered of sufficient magnitude to dictate regional strategy.

## Fuel and Energy

5.9 The demand for energy is expected to continue to increase over the next decades. Energy consumption per head of population in the United Kingdom is presently about half that of the United States. It is almost certain to double by the end of the century. Although the South East has no indigenous fuel resources other than coal, which is mined to a limited extent in Kent and used locally, no major regional problems over fuel supply are foreseen. The region possesses about half the national capacity for oil refining, with concentrations on the Thames estuary and the Solent, and about half the country's energy will be derived from oil by 1990 if present trends persist; the growing demand for gas, particularly for domestic heating, will be met by further use of natural gas from the North Sea; and, as forecast in the 1967 White Paper on fuel policy,<sup>2</sup> it is likely that new electricity generation capacity will be primarily based on nuclear power. Fuel distribution problems will be eased by the further spread of pipe-lines and by increasing use of electricity in place of the direct utilization of fuels for many purposes.

5.10 Satisfaction of the demand for electricity is not however without problems. The regional demand may double within the next decade and already about 25 per cent of its needs are met through the national grid from power stations in areas where generating costs are at present somewhat lower than in the South East. The economic advantages of this are soon likely to disappear and the grid's main function is, in any case, to secure supplies by the pooling of generating capacity throughout the country, not to supply areas which are permanently and substantially in deficit. Thus the region's future requirements for new generating capacity in the late 70's and 80's will need to be met from power stations predominantly located in the South East and a number of additional sites suitable for power stations will be required.

5.11 The choice of sites for these new power stations is always difficult, but in the case of nuclear stations is less constrained than in the past. As a result of advances in design, nuclear power stations may now be safely located closer to population centres than was permitted prior to 1968. The power stations themselves may vary in type and size—from the largest, exceeding 3,000 megawatts capacity and needing up to 250 acres of land, to the relatively small, of 200 megawatts capacity, needing five

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2. Cmnd 3438.

acres only. The need for very large quantities of water for cooling purposes remains and, since water quality is not of first importance, this may continue to indicate estuarial sites particularly in areas of water deficiency.

5.12 The coast is, however, already under pressures of many kinds for a variety of uses and treated sewage effluent is acceptable for cooling purposes. Further, if stations are constructed at some distance from the areas of the demand which they are intended to supply, the greater will be the need for the multiplication of transmission lines. These not only push up costs: they are unacceptable intrusions in areas of conservation importance (see Chapter 4) and generally they detract from the open character of the countryside. Where the provision of additional high voltage transmission lines in areas sensitive to their impact is unavoidable, the only solution at present is to run considerable lengths underground, resulting in very high costs.

5.13 Few problems are posed by natural gas which, according to the Ministry of Technology, may supply about 15 per cent of the country's energy needs over the next 20 or more years. One of the benefits of the direct use of natural gas rather than of gas manufactured from coal or oil is that the building of new gas-making plant has been made unnecessary. In addition, the higher calorific value of natural gas has the effect of increasing the capacity of mains and storage plant. The development of a super-grid for the distribution of natural gas throughout the region means that supplies can be assured almost everywhere, although concentration of urban development will make for economies in local distribution costs.

5.14 The conclusion has been drawn, as in the case of water and of surface and foul drainage, that the supply of energy is unlikely to impose any limitations on possible patterns of regional development but, to ensure an adequate supply of power at minimum cost to the community, appropriate provision should be made in sub-regional and local plans for the development of electricity generating stations as close as is practicable to the main areas of demand and expected deficit and in conformity with a regional programme.

#### Other Services

5.15 The team recognises that as the population increases in numbers and prosperity other public utilities, in particular waste disposal, will come under strain. London's waste is expected to grow in weight from under 3 million to about 4 million tons annually by 1980. The possibility of using abandoned gravel pits for increasing quantities of this waste has already been mentioned (see Chapter 4), but care should be exercised over disposal of waste in this manner because of the danger of polluting underground water supplies. It seems however, on the evidence presently available, that the problems confronting these other public utilities are not of significance in deciding upon alternative strategies for development although regional co-ordination may well be called for.

#### Summary and Conclusions

5.16 The public utilities considered in this chapter are not therefore a critical factor in determining the location of large-scale urban development, and there seems no doubt that adequate supplies of water and power can be ensured in the South East at an acceptable cost to the community and without any determinable difference in the consumption of resources between the strategies considered. However, provision of these services has a significant influence upon programming and careful coordination of development with the provision of water and energy supplies is therefore essential. In the context of the need to make the best use of the region's resources, an objective of the regional plan must be to provide for the most efficient use of investment in public utilities, especially in the phasing of new development.

6.1 The South East region is the focus of the country's inter-regional and international transport networks. This is a consequence both of London's size and of the South East's proximity to the Continent and to the main sea and air routes serving northern Europe. Major roads have radiated from London since Roman times; the railways, laid down in the 19th century, follow a similar pattern. Recent developments have emphasised the region's importance in terms of international transport. Five of the South East's civil airports (Heathrow, Gatwick, Southend, Luton and Lydd) handled between them 12.3 million out of a national total of 13.8 million passengers on international flights in 1967. Of the 9.2 million passengers who used Britain's sea ports in 1968, two thirds passed through the region's ports, four million through Dover alone. Proposed developments (notably the Third London Airport and the Channel Tunnel) and closer links with the Continent will probably increase the proportion of the country's international traffic which passes through the South East.

6.2 International traffic is primarily a matter of national rather than regional concern. However, sea and air transport employ large numbers of workers and the facilities required and the urban settlements directly associated with these are extensive. Their impact on the region is therefore considerable. The proposed Third London Airport will be a particularly important element in future regional development. By contrast the traffic on land generated by the international links, although important in the immediate vicinity of docks and airports, is not of particular significance in the context of all journeys on land in the region. These journeys, on the South East's railways and inter-urban roads, totalled over 23 million daily in 1966, nearly half of them to and from work or on business. As a result of wider car ownership and a large increase in numbers of leisure-time trips, the number of journeys may increase by nearly half by 1981, the greater part of them on the roads. In this chapter, the problems and prospects of international transport are considered first and then, in somewhat more detail, those of inter and intra-regional transport.

### Seaports

6.3 Ports everywhere are being revolutionised by increases in ship sizes, particularly of certain bulk (oil, ore, grain) carriers, and by changes in cargo handling techniques, especially the introduction of containers. The effects are to concentrate a significant proportion of port activity on a much smaller number of berths at a limited number of ports, and to transform a labour-intensive industry increasingly into a capital-intensive one. The degree and rate of change however varies widely between the different deep sea bulk and general cargo traffics.

6.4 The major bulk traffics are expected to concentrate on a small number of ports because of the economies to be achieved by the use of very large deep-sea carriers, which require deep water and costly equipment to ensure fast rates of discharge. In the South East oil terminals are already concentrated down-stream on the Thames and the Medway, and on the Solent, but the depths of approach channels effectively prevent the largest existing tankers using these waters, except when part-laden. The size of deep-sea tankers is expected to grow and the Port of London Authority have consequently suggested a new deep water port, using reclaimed land, at Foulness/Maplin Sands. There are a number of other places round the British Isles (e.g. Bantry Bay and the Clyde) and elsewhere where trans-shipment facilities for the largest tankers might be, and in some cases already have been, provided.

6.5 The proportion of general cargo traffic transported in containers seems likely to increase substantially and rapidly, and the high cost of handling equipment and rate of through-put at container berths point to concentration of this traffic also on a small number of ports. The optimum transport system

for containers (size of ships, number of berths, relationship to inland transport, etc) remains uncertain; it may be a considerable time before containers are adopted in countries where labour is cheap; and the proportion of general cargo traffic unsuitable for containerization, on account of shape and size for example, is expected to remain very high. Adoption of LASH (lighter-aboard-ship) vessels,<sup>1</sup> the first of which began operating on the Medway in 1969, may also extend the life of existing port facilities. Thus it seems likely that there will continue to be a wide dispersal of deep-sea general cargo traffic among Britain's ports, but container traffic will tend to concentrate on new or modernised berths. In the case of the Port of London this involves sites down-stream of the traditional dock area, where more land is available for marshalling road and rail transport and for the construction of extensive storage facilities. Special tidal conditions (four tides each day) are found at Southampton which, together with the absence of locks, allow services to be tightly scheduled. These advantages, and the port's location on the sea lanes to and from the north Continental ports, make Southampton particularly attractive as a calling port for container ships. It is already the country's premier port for passenger liners. About three quarters of Britain's deep sea passengers passed through Southampton in 1968.

6.6 The revolution in ship sizes and cargo handling techniques has had less impact on medium-sized and small ports. Those nearest to the Continent, and not at risk from the Channel Tunnel (see paragraph 6.14), are expected to benefit from the possible expansion of roll-on, roll-off services for road vehicles and from the fact that Britain's short-sea general cargo traffic has been increasing more rapidly than deep-sea general cargo traffic in recent years. The prospects for the smallest ports are, however, less assured, because both coal and coastal general cargo traffic are tending to decline and because the inland distribution of oil, between ports, refineries and major distribution centres, may be by pipeline.

6.7 The future development of the major ports in the South East is a matter for decision in the light of national rather than regional considerations.

6.8 One of the major issues for national decision is the proposal by the National Ports Council that a maritime industrial area scheme, or schemes, (MIDAS) should be promoted in Britain to match similar developments on the Continent, for example at Rotterdam and Antwerp. The proposal arises from the fact that, with the growth in size of bulk carriers and as imported raw materials increasingly replace indigenous supplies, it is logical for processing industries, e.g. petrol refining and petro-chemicals, steel, aluminium, synthetic rubber and flour milling, to establish themselves near the sea. These industries might in turn attract secondary industries using their products. The physical requirements are deep water and land suitable for industrial development adjacent to each other and landward access to centres of population and industry. Such requirements are met in a limited number of places in Britain, including the Thames/Medway area in the South East. If the current Government sponsored study of the concept results in a decision to proceed with a MIDA project, among the factors in favour of the establishment of a MIDA in the South East which the Government would need to consider are the economic benefits of locating processing industries near to large and growing markets; the degree to which MIDA industries might be capital rather than labour-intensive; and the possibility of sharing certain MIDA facilities with those of the proposed Third London Airport should this be developed at Foulness. On the other hand, concentration of bulk-processing industries in the South East, some of them perhaps new to the region and likely to generate growth of related secondary industries, would conflict with the Government's present regional development priorities (see Chapter 2). In the light of this, although recognizing that the decision on a possible MIDA and its location, when made, will take into account a number of national and other considerations not listed here, the team has concluded that on present evidence there seems no over-riding reason on regional planning grounds why a MIDA or other large-scale port-related industrial activity, should be promoted in the region.

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1. Present LASH vessels carry about 70 lighters, of up to 400 tons capacity each, with equipment for lifting them on and off. The lighters can be towed to and from wharves on shallow water once the LASH vessel itself has been moored in reasonably sheltered deep water.

6.9 Nonetheless, the team has concluded that the Thames/Medway area is likely to retain its position as the country's major port, due to its proximity to a large home market and to northern Europe, and that Southampton is likely to continue to grow, due to its particular advantages for deep sea passenger and container traffic. Generally, it seems unlikely that the pattern of ports in the region will change substantially, although the medium-sized ports not directly affected by the Channel Tunnel may well grow, both absolutely and relatively to the major ports, in terms of short-sea cargo and especially of roll-on, roll-off traffic, while the small ports may decline.

6.10 The National Ports Council has calculated that the volume of trade through British sea ports is likely to expand by about five per cent per year to 1973. The team has allowed for expansion of this order over the period of the study, subject to the likely changes in handling and transport techniques and in the distribution of trade already outlined. The location of ports in the South East, and their activities, are shown in Figure 21.

6.11 Sites suitable for the development of a MIDA are a scarce national resource (see paragraph 6.8). A further factor to be considered, irrespective of a decision whether or not a MIDA in the South East would be in the national interest, is the limitation of the existing Port of London Authority container port at Tilbury to ships of about 60,000 tons dwt. In view of these circumstances the team has concluded that a regional planning objective should be to steer development which does not specifically require such a location away from land adjacent to deep sea water.

#### Cross-Channel Traffic

6.12 The most significant change in cross-Channel traffic post-war has been the increase in the number of cars taken to the Continent on holiday and business (accompanied cars). The total has grown at an average rate of more than 13 per cent per year over the last 15 years, and in 1968 more than 930,000 road vehicles crossed by sea and air, over 95 per cent of them by sea. Studies in the early 1960s suggested that a railway tunnel would serve cross-Channel traffic more advantageously and cheaply than either a bridge or road tunnel or the further expansion of the then existing sea and air services.

6.13 The Prime Ministers of Britain and France announced in 1966 that a Tunnel would be built if mutually acceptable arrangements could be made. In 1969 the Minister of Transport said planning would proceed on the basis that the rail ferry terminal would be at Cheriton, north-west of Folkestone, near the proposed Tunnel portal, and a freight yard at either Stanford or Sevington, near Ashford. From the date of a decision on finance, and prior to an ultimate decision whether or not to proceed, about two years will be required for final studies, which will take account, among other things, of the latest transport developments, including container ships and hovercraft. Construction work might require another five years. On this basis the Tunnel could come into use in the late 1970s.

6.14 It is expected that the Tunnel, if built, would attract traffic in varying proportions from all other forms of cross-Channel transport, and that a number of shipping services from Dover, Folkestone and Newhaven and air services from Lydd and Ashford might be discontinued. Road traffic to the south coast is expected to increase substantially with or without the Tunnel, although it would still be a small component of the total traffic in the area except in the immediate vicinity of the sea and airports or the Tunnel terminals. Without the Tunnel, other forms of cross-Channel transport—sea, air and air cushion vehicles—would doubtless be developed and this would result in cross-Channel traffic being widely dispersed. With the Tunnel much of it would be directed towards Folkestone and a significant amount of additional traffic might be generated if the Tunnel proved a relatively cheap and convenient means of crossing to and from the Continent. Improved roads to London, and construction of orbital routes round London of sufficient capacity to absorb Tunnel traffic with points of origin and destination further afield, are planned to be completed by the time the Tunnel would be open. From a regional point of view it is desirable that the best use should be made of rail facilities to and from the Tunnel terminals not only for freight and passengers but also for car carrying, and that



appropriate steps are taken to make this possible, including the development of a number of inland terminals and the maintenance and improvement of railway links avoiding Greater London.

6.15 The Tunnel would be a link between the road and rail networks of Britain and the Continent. It follows that local industrial and related development is not a necessary corollary of the Tunnel's construction, although freight handling and passenger service facilities will be needed at the Tunnel terminals. It has also been noted that pressure for large-scale industrial developments around and directly associated with container ports does not seem to have arisen as yet. On the other hand, increasing trade with the Continent, possible membership of the European Economic Community and the existence on the other side of the Channel of the French equivalent of a Development Area, which may stimulate new industrial development, make it desirable that the possibility of some industrial development should not be precluded, if this is seen to be required in the national economic interest, not necessarily in close proximity to the Channel Tunnel terminals but readily accessible to them. The labour needed for the Tunnel and its terminals would probably not be very different from that of the sea and air services which are likely to be discontinued, and the need would arise in the same general area.

### Air Transport

6.16 Air traffic of all kinds has been increasing rapidly in recent years. For example, the total number of aircraft movements at the four British Airports Authority airports<sup>2</sup> increased on average by 7.6 per cent annually over the ten years to 1966. The Edwards Committee, which reported in 1969 on the future of the air transport industry in the United Kingdom,<sup>3</sup> said there would be continued rapid growth in passenger travel, particularly in the demand for non-scheduled, tourist services, also in cargo carrying and in the use of privately-chartered and air taxi services. The pattern of air movements is not, however, expected to change substantially. Mixed passenger-cargo aircraft are expected to continue to carry the bulk of medium distance air freight. Effective competition by inter-regional air services with improved main-line railways services (see paragraph 6.26) is unlikely unless it proves possible to develop quiet vertical and/or short take-off aircraft able to use landing areas in major urban centres (but local planning authorities would be prudent to bear possible sites in mind although the requirements of VTOL and STOL operations have still to be clarified).

6.17 As already pointed out (see paragraph 6.1), a high proportion of the country's international air traffic uses airports in the South East. Although some increases in services using airports outside the region seem both possible and desirable, the dominant position of the South East's airports is likely to be maintained, primarily because of the amount of traffic originating in or destined for the metropolitan region.

6.18 Large airports pose major planning problems due to the size of the work force which is related, directly or indirectly, to the airport and the amount of urban development required in consequence, together with pressures for linked industrial and commercial development. The adverse effects on the environment caused by aircraft noise are particularly important and the provision of adequate transport links with London and the rest of the country is likely to cause further environmental problems and to call for substantial investment. These problems are particularly acute in the case of the existing BAA airports and the proposed Third London Airport. The noise and land transport problems posed by Heathrow are well known. It is perhaps less well known that 46,000 workers are currently employed within Heathrow's perimeter. To estimate the population associated with the airport it is necessary to add the airport workers' families, those whose work is related to the airport but located outside the perimeter and those employed in providing local services, such as education, together with their families. The total may well exceed 250,000.

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2. Heathrow, Gatwick and Stansted, in the South East, and Prestwick in Scotland.

3. Cmnd 4018.



6.19 The population associated with the Third London Airport may be as high as 10 to 15 per cent of the expected regional population increases in the 20 years to the end of the century, if, as the Commission on the Third London Airport have predicted, the work force within the perimeter reaches 65,000 by that date.<sup>4</sup> The Commission have been made responsible for fully investigating possible sites, together with the timing of the airport's development, and will present their recommendations later this year. No useful purpose would be served by recapitulating here the various issues involved, but some of the regional issues that will need to be considered in relation to the four short-listed sites and to possible expansion of Luton and Gatwick are set out in Appendix C to this report.

6.20 In addition to the three London airports, it seems likely that a number of other large airports, usable in all weather conditions and capable of taking some of the largest commercial aircraft, will continue to be required in the region. The main national and international scheduled services will operate from Heathrow and Gatwick and from the Third London Airport in due course, but there will also still be a need for inter-regional 'bus-stop' services, particularly to serve areas to which cross-country journeys by land may be inconvenient and, more important, for some seasonal non-scheduled tourist services, the demand for which is expected to grow dramatically. The extent to which regional airports would be required to meet this need is particularly difficult to calculate since this depends in large measure on the proportion of such services which are accommodated at the three London airports. However, in view of the widespread effects of airport development, the team has concluded that the regional strategy should allow for a small number of regional airports (perhaps four in all), complementary to the three London airports and sited in relation to the settlement pattern of the South East and adjoining regions. To suggest the pattern of airport development throughout the region is however clearly impossible until the site of the Third London Airport has been determined.

6.21 In addition to ten major civil airports,<sup>5</sup> the region at present accommodates another 50 airfields of various kinds, including exclusively military airfields. Some of these may well become redundant, but a number of small airfields will continue to be required for testing aircraft, training pilots and also for private business and recreational flying, including gliding. Recreational flying has not achieved the popularity in Britain that it has in America although there has been some appreciable growth in recent years. British conditions, including the weather and restrictions in use of air space, are perhaps unfavourable. The team has concluded that the future of the region's small airfields will need to be considered in sub-regional and local structure plans although certain airfields may have wider significance, notably Biggin Hill for business flying, and it may be appropriate for the future development of these to be considered at regional level.

## Railways

6.22 The railway network in the South East, as already noted above (paragraph 6.1) is essentially radial to Greater London in form, although there are a number of exceptions to the pattern, notably lines from Southampton to Hastings, the Midlands and Severnside. This radial pattern reflects the most important regional function of the network which is the carriage of workers to, from and within Greater London. Of the 1.2 million people who travelled to work in Central London daily in 1966, about three-quarters travelled by rail. Traffic on the non-radial routes was relatively light.

6.23 The railway network already serves existing main population centres both within and outside the region. Since the capital cost of any significant extension would be high and the traffic flows required to justify such expenditure very large (perhaps 20,000 journeys in the peak hour for a commuter service), any extension could only be justified on economic grounds in the case of proposals for new or expanded urban developments of considerable size, involving populations of perhaps 500,000 or more, on sites not already served by rail. An exception to this may arise in the case of the Third

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4. See Papers and Proceedings of the Commission on the Third London Airport, pub HMSO, 1970.

5. Heathrow, Gatwick, Stansted, Bournemouth (Hurn), Luton, Lydd, Ashford, Portsmouth, Southampton, Southend.

London Airport, because of the large amount of traffic this is expected to generate and because special services for air passengers, distinct from ordinary rail services, are likely to be required, at least to a Central London terminal. If a new railway line is needed between the Third London Airport and Central London, it would probably be for the exclusive use of airport traffic. With this exception, the railway network has been regarded by the team as fixed although it is recognised that there may be further closures of lightly used lines. The team does not foresee that such closures would, subject to local social need, be detrimental in the regional context, provided that lines avoiding London and serving the proposed Channel Tunnel are maintained at least until the pattern of Tunnel traffic has been clarified (see paragraph 6.14). A case for the replacement of conventional railways, whether in whole or in part, by some new form of fixed track transport system has not yet been established (see paragraph 6.29).

6.24 As indicated above (paragraph 6.22), Greater London, and in particular Central London, could not continue to function without very large daily flows of workers, a high proportion of whom travel by rail. There are in any case a large number of "captive" public transport users, those who need to travel and do not have the option to use private transport. The maintenance and improvement of railway services, both to continue to attract those who have private vehicles available and to serve those who have no other means of transport, is therefore essential for the functioning and most economical development of Central London and of the region.

6.25 The numbers using the railway for journeys to work in London have fluctuated only slightly over the past decade, although distances travelled have increased somewhat. The proportion arriving at the Central London termini in the morning peak hour has, however, increased, partly because the amount of manual employment in Central London has fallen (see Chapter 2) and because manual workers, who are usually early travellers, have given way to office workers. The commuter flows are not only heavily concentrated in time: they are also unbalanced in terms of railway capacity, with 90 per cent of those carried by British Rail using BR's Eastern and Southern Regions and only ten per cent BR's London, Midland and Western Regions. The degree of overloading, or in some cases surplus capacity, also varies between the four BR Regions in a broadly similar way. The effect of this on the operational efficiency of the heavily loaded Regions is well known.

6.26 Over a large part of the existing network, the number of trains arriving in London in the peak hour is, given the present rolling stock and installations, the maximum for which paths can be found. In the case of certain Southern Region lines it exceeds the number which can be operated in all conditions, with the available equipment, within the desired standard of punctuality. The most important capacity constraints are bottlenecks in the London area affecting the Southern and Eastern Regions—at Borough Market Junction, immediately north of East Croydon, between Vauxhall and Waterloo, and the Fenchurch Street and Liverpool Street termini which, in their present form, cannot accept more trains. To improve rail capacity major civil engineering works would, in most cases, be required but a number of less expensive developments are in hand or under investigation which should enable speeds to be raised and thus effectively increase capacity<sup>6</sup>

6.27 British Rail's policy over the last two decades has been aimed primarily at improving main-line train performance in two stages. In the 1950s the aims were to operate main line passenger services at running speeds of about 75 mph and goods at 50 mph. These aims have been achieved over much of the national system. Indeed, following the introduction of improved track, signalling and rolling stock, speeds of up to 100 mph have been attained on certain passenger services. The current targets are an increase to 125 mph for passenger services on selected main lines, and an increase in goods service speeds to 75 mph, with a further increase to 150 mph for passenger services when advanced passenger trains, with improved suspension and higher power-to-weight ratios than existing stock, come into

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6. The maintenance and improvement of London Transport's underground system are no less important. Although the service it provides has been regarded for the purposes of this study as of local rather than regional significance, the system has a regional function to the extent that it relieves the main inter-urban railway network and gives access to it.

service in the late 1970s. Some long-distance services in the region have benefited and will benefit if the new targets are achieved but the main regional implication will be the maintenance and perhaps increase in BR's share of inter-regional traffic (see paragraph 6.16).

6.28 Within the region services have improved more gradually and despite an increase in peak hour services on the Southern Region in 1967 there remains much over-crowding. A number of improvements are, however, possible within the probable financial constraints and some were set out in BR's ten-year plan for the Southern Region announced early in the year. They include partial automation of train control, including new signalling systems; automation of passenger handling, such as ticket inspection; improvement of rolling stock, including the adoption of power-operated doors to reduce station stop times; and further development of motive power units.

6.29 Improvements in rolling stock and track offer perhaps the most obvious scope, in the short term, for increasing capacity and providing better travelling conditions for commuters. In the long term improvements in traffic control, made possible by, for example, automatic data analysis, should lead to more effective operation and co-ordination of services. Certainly the evidence available to the team suggests that alternatives to the orthodox railway combination of steel rails and steel wheels are unlikely to become attractive propositions over a substantial period ahead. This is not simply a matter of cost or of timing although any widespread change in public transport systems is not likely to be introduced quickly. One particular problem is that mono rail systems use concrete beams which at present have slow and cumbersome switching arrangements. Air cushion vehicles on land also require concrete tracks, which present the same difficulty. Other proposals are more likely to have specialised and urban rather than regional applications.

6.30 In short, the existing railway network offers significant scope for improvement of services. Nonetheless, even if widespread improvements are made, it seems clear that, for some time to come, decisions on development proposals which seem likely to generate railway peak hour passenger traffic into London will need to take careful account of rail capacity, and particularly the extent of over-crowding which exists and is likely to continue. British Rail have calculated that on the overloaded South Eastern services of the Southern Region network it would cost, at present rates, £8.8 million to put an additional 4,600 seats (six trains) into London at the peak hour. The capital cost would be equivalent to 23s. per additional seat per working day. By contrast a similar increase in seating capacity for a service into Euston would entail expenditure of only £1.4 million, equivalent to 4s. per additional seat per working day.<sup>7</sup> From the railway point of view, therefore, it seems desirable that the main weight of residential development over, perhaps, the next 20 years, should be to the north-west and west of the region, rather than to the south and east.

## Roads

6.31 Inter-urban road capacities in the South East reflect very approximately the amount of traffic desiring to use the various routes although inevitably, since demand has been growing rapidly in recent years, the provision of capacity on a number of routes has lagged behind demand.

6.32 As with rail, the major road routes form a pattern radial to London and these carry the heaviest traffic loadings. Several of the radial routes have been, or are being, improved to motorway standard. A number of routes at a tangent to Greater London are no less significant in regional terms although loadings on these do not, in general, match those on the radial routes. An exception is the series of tangential routes which form an orbital, but far from regular, pattern close around Greater London. Demand on much of this route is of similar order to that on the major radials.

6.33 During the past decade the main aims of the roads programme have been to establish a basic national network of high quality trunk routes, mostly motorways; to improve other important routes

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7. National Board for Prices and Incomes. Report No. 137, pub. HMSO 1969.

serving the needs of short distance traffic; to improve a great many individual routes by specific works where these have been most needed for safety reasons and to increase capacity; and, more recently, to direct a substantial and growing share of total roads investment to primary road systems in urban areas. The resulting construction programme has eased movement problems on the region's radial routes, where the demand has been generally most pressing, but tangential movements, although often heavy, have generally been catered for by relatively minor road works, and traffic management measures in built-up areas. Increasing weight is being given to the impact of new construction on the environment especially in urban areas, and achievement of acceptable environmental standards is likely to claim an increasing share of expenditure.

6.34 Although the team has concentrated its attention on the transport position at 1981 and in later years (see Chapters 7, 8 and 10) an assessment was made of the position in 1966, principally in terms of estimated speeds at the peak journey to work hours on the main regional routes<sup>8</sup> and of estimated flows of traffic in relation to each route's capacity. This assessment indicated that speeds of 45 mph and over were commonly achieved on the main radial routes and that speeds restricted to 20 mph and below occur in London, in the OMA, mainly south-west, south and south-east of London and also in South Essex; and in the OSE mainly in the immediate vicinity of major towns. Outside London, flows were heaviest in the OMA, notably north-west and south-west of London. Conclusions drawn from this assessment must be treated with reserve, but they clearly suggest, for the inter-urban roads programme, the need for further new works and selective improvements on the main radials and tangential routes, to relieve overloadings. They also suggest the need for further work on local road systems to relieve the main routes of the present substantial loadings arising from short local journeys and to provide better access to the regional routes.

#### Existing Plans and Future Needs

6.35 Detailed plans by the Ministry of Transport and local highway authorities provide for the continuation of the roads programme into the late 1970s. An increase in total capital expenditure on inter-urban roads in the region to an average £50 million per year to 1981, as is expected, will result in quite dramatic changes in regional routes. Improvements and new construction already planned will add some 400 miles of motorway and almost 500 miles of all purpose dual carriageway to the existing network; will make possible the completion of a high standard orbital route to the south and west of London; and will reduce the amount of poor standard single carriageway roads in the regional network outside Greater London from 2,650 miles in 1960 to 2,200 miles in 1981. Improvements in urban areas are likely to be stepped up, but the team has recognised that the difficult and complex problems to be solved in such cases require detailed structure plan studies. The team has therefore not attempted to judge the appropriate division of investment between urban and inter-urban roads or the particular requirements of the bus services.<sup>9</sup>

6.36 The adequacy or otherwise of the resulting regional network is discussed elsewhere (see Chapter 7). It is sufficient to say here that in assessing the likely level of demand it was assumed that the growth of private transport was likely to continue for as far ahead as could be foreseen with any confidence. Car ownership depends in part on income. It has been assumed that real income will rise at a rate of 2.8 per cent per year compound and that the distribution of incomes will not change significantly (see Chapter 3). Car ownership also depends in part on prices, and it has been assumed that car prices will continue to rise but more slowly than prices in general. The result of this calcu-

8. Regional routes are defined, for the purpose of the study, as those carrying mainly inter-urban and inter-regional traffic. Urban road systems and other roads of local significance only are excluded. It has, of course, been necessary to allow for some urban routes in the team's analyses, but only as feeders of the regional routes.

9. As in the case of the London Transport underground system public transport on the roads has been regarded for the purpose of this study as of local rather than regional significance. Within towns there are clear social (see paragraph 6.24) and environmental advantages to be gained by maintaining and improving bus services as a mass alternative to private vehicles. These services are regional important to the extent that the functioning of the regional railway network is substantially dependent on buses for moving passengers to and from railway stations. Also, inter-urban bus services are important on routes where no rail service exists.

lation, taking into account past experience, is a prediction that the number of cars owned in the South East will increase by nearly 130 per cent to 1981, from 3.1 million in 1966 to 7.1 million in 1981. The number of trips per household depends largely on whether or not a car is owned. Transport surveys indicate that the number of trips for all purposes daily (by all means of transport, public as well as private) will increase by nearly 50 per cent, from 23.5 million in 1966 to 33.5 million in 1981, and that average trip lengths will also increase. Future commercial vehicle trips have been forecast from predictions of growth in the amounts of various commodities hauled. The forecast is that the tonnage carried by road vehicles into, from and within the region will increase by about 60 per cent up to 1981. It is expected that there will be about 2.75 million commercial vehicle trips daily in 1981.

## Summary and Conclusion

6.37 As was pointed out at the beginning of this chapter, any consideration of transport in the South East is complicated by international links, which serve both the region and the country as a whole; inter-regional links, radiating out from London; and links which are essentially of regional importance. This analysis has sought to distinguish between matters primarily of national and those primarily of regional concern. Consideration of transport problems and prospects is also complicated by the inter-relationship of the various facilities and modes of transport (ports, for example, require good land links with their hinterlands) and by the fact that transport provision may be made in response to other developments or may in turn determine where other developments are located (as in the case of the urban development required in connection with the Third London Airport).

6.38 Within the region the main factors to be taken into consideration in seeking to match transport and land use proposals seem likely to be—

- i. continuing high levels of congestion and of costs for improvements to the transport system within Greater London;
- ii. increasing congestion but greater opportunities for improvements at less cost in much of the OMA; and
- iii. relatively easy transport conditions and opportunities to extend and improve the system at reasonable cost in much of the OSE.

6.39 From a transport point of view it would therefore be beneficial if—

- i. the population of Greater London was somewhat reduced, provided employment was reduced at least proportionately, or stabilised at the expected 1981 level (7.3 million);
- ii. population and employment growth in the OMA was contained at a level which would allow effective operation and improvement of the transport system without posing environmental and urban form problems; and
- iii. population and employment growth was encouraged in the OSE to a level consistent with the achievement of other regional objectives.

6.40 Also to be taken into account are the costs and benefits of maintaining and improving the transport system. The costs which fall on the community take the form of direct costs to travellers, such as fares, indirect costs such as delays, and infrastructure costs such as investment in new roads. The benefits arise in two ways. First, through reductions in the overall costs—in time or money—of journeys. Second, from the extra journeys that are only possible through improvements being made to the transport system.

6.41 An appropriate objective for the regional strategy is therefore to use existing inter-urban transport facilities and to adapt and improve these facilities within a reasonable capital cost, so as to

- i. secure the greatest possible ease of movement within the region; and
- ii. produce the greatest possible net benefits for transport users.



## THE POSITION AT 1981

7.1 Plans exist for substantial changes in the region for some years ahead. Development plans, planning permissions and decisions already taken in many fields set a pattern for development through most of the 1970's. Current programmes for New Towns, town expansions, main road construction, railway improvements and the various public utilities needed to serve planned developments cannot easily be altered, since a long period must inevitably elapse between the preparation of schemes and completion of any major development project. One of the team's first tasks was therefore to ascertain the kind of situation, in terms of the distribution of population, employment and housing, and of the transport system, which could be expected in 1981, the year to which many development plans run. The scope for manoeuvre in planning before 1981 is mentioned later (see chapter 10).

## Population

7.2 As previously explained (Chapter 2), the population design figure adopted for 1981 was 18.6 million. To discover how this population might be distributed, the team used development plan figures, where these were available, and for other areas asked local planning authority officers to make forecasts for their areas by estimating both the numbers likely to be occupying the existing housing stock and probable gains and losses in population due to new development. In the case of Greater London, the team accepted the upper population estimate for 1981 (7.3 million) given in the Greater London Development Plan (1969). Aggregated, the development plan figures and forecasts indicated a regional population of 18.9 million at 1981. The forecasts were then adjusted to the 18.6 million control figure by assuming that population growth was more likely in districts near London, where the existing demand for additional houses is high, than on the fringes of the region.

7.3 The population distribution at 1966 by planning districts is shown in Figure 5 and the expected distribution at 1981 in Figure 22. A comparison of the population distributions by divisions of the region is shown in Table 7.1 below:

Table 7.1: Population 1966-81

	(thousands)		
	1966	1981	Change 1966-81
Greater London	7,825	7,336	-489
OMA	5,004	6,190	1,186
OSE	4,160	5,161	1,001
Region	16,989	18,687	1,698

Source: The 1966 figures are from Census, adjusted for under-enumeration.

Existing urban areas and land allocated for development in the Green Belt ring are expected to accommodate an additional 240,000 people during these 15 years.



7.4 Two things are clear. First, the relative size of Greater London in terms of population is likely to continue to decline. Under 40 per cent of the regional population is expected to live in London in 1981, compared with 45 per cent in 1968 and over 50 per cent in 1951 (see Chapter 2). Second, population growth elsewhere in the region is unlikely to follow any simple geographical pattern, although growth in the OSE (25 per cent) may be proportionately very similar to growth in the OMA (24 per cent).

7.5 In the OMA the population is expected to grow particularly rapidly, both numerically and proportionately, in the Reading/Wokingham/Aldershot/Basingstoke area (by about 200,000, or 37 per cent); in South Essex (by about 160,000, or 28 per cent); and in North-west Kent and the Medway area (by about 140,000, or 28 per cent). Between them, these areas are expected to absorb the equivalent of about one-quarter of the total population increase outside London to 1981. In the OSE the principal growth areas are expected to be South Hampshire (about 160,000, or 19 per cent) and the new city of Milton Keynes (80,000).

### Labour Force and Employment

7.6 Because the forecast population increase will not be uniformly spread among the age-groups and because the school-leaving age is due to be raised in 1972, the numbers of the economically active<sup>1</sup> are likely to increase proportionately less fast than the regional population as a whole, from 8.36 million to 8.68 million, although from the late 1970s onwards the trend is likely to be reversed (see Chapter 2). A comparison of the economically active at 1966 and 1981, as calculated by the team, by divisions of the region, is shown in Table 7.2 below:

Table 7.2: Economically Active 1966-81

(thousands)

	1966		1981		Change 1966-81 Persons
	Persons	% of pop.	Persons	% of pop.	
Greater London	4,160	53	3,675	50	-485
OMA	2,374	47	2,848	46	474
OSE	1,828	44	2,163	42	335
Region	8,362	49	8,686	46	324

Source: The 1966 figures are from Census, adjusted for under-enumeration.

7.7 The labour force in the region is thus expected to increase between 1966 and 1981 by less than one quarter of the increase in the previous 15 years, which indicates the possibility of a regional shortage of labour of some magnitude in the 1970s. Of particular importance is the expected fall in the size of London's resident labour force (485,000), which is very nearly as large as the expected fall in population (489,000), owing to expected changes in the population's age and sex structure. Relatively high birth rates at the beginning of the century and again recently will, by 1981, increase the proportions in the population of old and young people and thus reduce the proportion of those of working age. The net loss by migration, being proportionately high in the middle-aged groups, exacerbates the position.

7.8 The numbers employed in an area differ from the number of economically active who live there because many workers live some distance from their jobs (employment) and because those listed as

1. For definition, see Chapter 2, footnote to paragraph 2.9.

economically active include the unemployed. The location of employment in 1966 is known but, as previously explained (see Chapter 2), information at present available is inadequate to provide a basis for a reasonably accurate forecast of either future demand for labour or the number of jobs likely to be filled at 1981 and beyond. Two assumptions were therefore made. It was assumed that the demand for labour in London would lead to an increase of about 100,000 in the numbers of workers travelling in daily from the rest of the region, to compensate in some measure for the anticipated sharp fall in London's resident labour force (see paragraph 7.6), this also being off-set, to some extent, by an outflow of mobile employment. In the rest of the region it was assumed that employment would expand sufficiently for the increased number of workers to find work locally or to journey to work elsewhere following a pattern similar to that in 1966. The resulting forecast of employment at 1981, compared with the position in 1966, by divisions of the region, is shown in Table 7.3 below:

Table 7.3: Employment 1966-81

	1966	1981	(thousands) Change 1966-81
Greater London	4,450	4,083	-367
OMA	2,060	2,484	424
OSE	1,709	2,027	318
Region	8,219	8,594	375

Source: The 1966 figures are from Census, adjusted for under-enumeration.

The forecast distribution of employment at 1981 by planning districts is shown in Figure 23. The proportion employed in manufacturing industry has been declining (see Chapter 2) and there is no reason to expect this trend to change.

## Housing

7.9 The team assumed that the net outward movement of population from London would continue up to 1981. This theoretically should enable the present shortage of houses in London to be overcome and progress to be made with replacement of unfit houses. However the opportunities for employment and other attractions of London are thought likely to maintain a demand for homes that continuously exceeds supply. Outside London it seemed reasonable to expect a building programme to be maintained that would enable the overall demand to be met after allowance of a reserve for second homes and for temporarily empty houses (houses changing hands or under repair etc.).

## Transport

7.10 The forecast distribution of population and employment at 1981, described in this chapter, was used for the calculation of traffic flows for transport testing purposes.

### (a) Rail

7.11 It seems clear that the heaviest passenger flows for British Railways will continue to be those on services to Central London in the peak journey-to-work period and that the major constraints on capacity will be on the approaches to some Central London termini. Although the numbers travelling into Greater London to work are expected to increase (see paragraph 7.8), there is likely to be a

decrease in journeys to work in Central London from within Greater London, reflecting the anticipated fall in the size of the resident labour force. This is expected to lead to a small decrease in total numbers arriving at the Central London railway termini. Passenger flows seem likely to increase up to 1981 on services in British Railway Divisions which are least heavily loaded at present and to decrease on Southern Region's particularly heavily loaded south-eastern and central divisions. Loadings on services into Liverpool Street and Fenchurch Street and in Southern Region's south-western division are likely to remain much the same. Thus the pattern of railway journeys-to-work is likely to relate more satisfactorily to British Rail's capacity in 1981. Nevertheless there will still be some over-loading on a number of lines within the peak hour.

#### (b) Roads

7.12 The transport test suggests that the expected very large increase in total numbers of journeys in the region (see Chapter 6) is likely to be distributed in a way that provides satisfactory level of service on much of the inter-urban road network. However, difficult or largely unsatisfactory conditions during the journey-to-work period are likely on some parts of the network—on many roads in the OMA to the south-west of London, particularly on the main radials; on the main routes leading to Southend; on short lengths of London's other main radials; and on the approaches to Southampton and Oxford. The degree to which congestion occurs on these routes in practice will however depend on many factors, some of which are matters for sub-regional rather than regional planning.

7.13 On some of the region's roads the heaviest week-day loading is expected outside the peak journey-to-work hour. Commercial traffic is generally heavier outside the rush hours and car trips for purposes other than to work are generally longer than journeys to work. This is of particular significance on the trunk routes, especially the motorways.

7.14 In general, therefore, driving conditions on the inter-urban roads in 1981 are not expected to be unsatisfactory, provided the scale of investment envisaged by the team is achieved. Travel speeds will remain generally high and most of the main radial routes will be operating at reasonable standards of service, the more so the further away from London.

#### Summary and Conclusions

7.15 The period up to 1981 is likely to be one of very rapid change, but the changes are not expected to be at an even rate or to affect all parts of the region in the same way. The net outward movement of population from London may be reduced towards the end of the period or may continue at a high rate. In either case the sharp decline in the numbers of workers available is likely to begin to be arrested as a result of the expected increase in the proportion of workers in the total population from the late 1970s onwards. The movement of population, which during the 1950s and early 1960s was predominantly into the OMA, is expected increasingly to be into the OSE, in consequence of planned growth at Milton Keynes and in other town expansion schemes. However the housing problems of London are unlikely to be solved because of the rate of obsolescence of houses, due to the large numbers built towards the end of the last century. Generally, the demand for leisure pursuits and the availability of cars for private transport are expected to continue to grow rapidly.

7.16 This chapter has emphasized the developments for which plans already exist and has described the situation at 1981 to which these plans are leading. The result is likely to be a pattern of population and employment which, while planned satisfactorily in the light of local conditions and current policies and controls, was not conceived in relation to the long-term regional objectives emerging from the team's studies. (The likely extent of built-up areas in the region at 1981 is shown in Figure 24). In particular it will make only a limited contribution to the concentration of development in large centres, which these studies indicate is desirable. It may therefore be appropriate to modify existing plans, so far as this is practicable, to support the regional strategy.

## ALTERNATIVE HYPOTHESES AT 1991

## 1991A

8.1 The terms of reference required the team "to consider and report with recommendations of patterns of development for the South East, taking as a starting point the strategy proposals of the South East Economic Planning Council". These proposals were contained in the Council's first report, "A Strategy for the South East", published in November 1967. The proposals cover the period 1981 to 2001 and beyond, but the Council did not describe in detail the situation they envisaged at any particular point of time in the future. It was necessary for the team to translate the Council's proposals into allocations of population and employment figures to specific areas, and agree these with the Council, to that alternative development patterns 20 years or so ahead might be examined and compared. In interpreting the Council's strategy (which, for ease of reference, has been termed 1991A), the team took account of information which had become available since 1967, particularly about changing trends and decisions that had been taken by the Government meanwhile on proposals for town expansions.

8.2 The main features of the 1991A strategy, as derived from the Council's proposals, were—

- i. stabilisation of Greater London's population, but at a lower level than envisaged by the Council (7.3 million, rather than 8 million);
- ii. stabilisation of population within the Metropolitan Green Belt at the 1981 level of 1.7 million;
- iii. accommodation of as much population and employment as possible in new cities and other large new counter magnet developments 40 to 80 miles away from London, notably at Milton Keynes (in association with Northampton and Wellingborough), South Hampshire and South Essex, together with some long-term expansion of Ipswich;
- iv. accommodation of the rest of the region's population and employment growth, so far as possible, in sectors along the main radial communication routes between London and the more distant new developments; and
- v. limitation of such growth in the "green" areas between the proposed radial sectors.

## Population

8.3 The population design figure adopted by the team for the region at 1991 was 20.0 million (see Chapter 2), although subsequent adjustments in view of changes which the team had made to local forecasts for 1981 brought the total up to 20.135 million, which however included growth at Northampton, Wellingborough and Ipswich outside the region but regarded as catering for some South East regional growth.

8.4 Some growth clearly must occur in the "green" areas to meet the need for services and to maintain the economic vitality of the major employment centres<sup>1</sup> that lie outside the radial growth sectors. It was decided that the "green" areas might accommodate about the same share of the region's population as at 1981. This involved providing for a population increase of 300,000, which was allocated according to judgment on potential capacity and known commitments.

8.5 It followed that the new cities and the radial growth sectors must, between them, accommodate a population increase of 1.1 million between 1981 and 1991A, i.e. not only their own share of the region's growth but also that of London, in view of the stabilisation of London's population at the 1981 level. An important factor in considering the practicability of providing for much of this population growth well away from London was the extent to which employment might be expected to become available in the outer parts of the metropolitan region and beyond. Studies of the move-

1. Aylesbury, Bournemouth, Brighton, Eastbourne, Harlow, Hastings, High Wycombe, Hove, Oxford and Worthing.

ment of manufacturing firms post-war indicated that employment might be mobile within the region on a scale sufficient to make at least some large-scale development at this distance from London feasible. About two-thirds of the 1.1 million population increase was therefore allocated to the major growth areas and the remainder was distributed along the radial sectors, not uniformly but generally in districts considered to have the strongest potential for growth.

8.6 A comparison of the population distribution at 1981 and at 1991A, as agreed with the Council, is shown in Table 8.1 below:

Table 8.1: Population 1981–1991A

	(thousands)		
	1981	1991A	Change 1981–91A
Greater London	7,336	7,336	—
OMA	6,190	6,839	649
OSE	5,161	5,804	643
Outside region (Northampton, Wellingborough, Ipswich)	—	156	156
Region	18,687	20,135	1,448

Population growth over the period 1981–1991A, by planning districts, is shown in Figure 25.

8.7 Despite stabilisation of Greater London's population at what, in view of recent trends, may turn out to be a high figure, the 1991A strategy would mean a further decline in the relative size of London in terms of population. Although total population growth to 1991A in the OMA and the OSE would be very similar, growth in the OSE (12.5 per cent) would be proportionately greater than in the OMA (10.5 per cent). Also, since there would be little change in the Metropolitan Green Belt, population growth in the OMA would be concentrated into districts eight miles or more from the Greater London boundary.

8.8 The areas in the OMA to which most population increase was allocated were South Essex; the Reading/Aldershot area; the Crawley/Horley/Horsham area; and the Medway area of Kent—although the rate of growth provided for would be significantly less than that expected in the period up to 1981. The major growth areas in the OSE would be South Hampshire and Milton Keynes (together with Northampton and Wellingborough). The total and proportionate change over the decade to 1991A and the 1991A total population of these areas are shown in Table 8.2 below:

Table 8.2: Major growth areas 1991A

	Population		
	Change 1981–91A	% Change	1991A total
OMA South Essex (including part of Chelmsford district)	200,000	27	900,000
Reading/Aldershot area	130,000	20	800,000
Crawley Area	110,000	40	400,000
Medway Kent	55,000	10	600,000
OSE South Hampshire	150,000	15	1,150,000
Milton Keynes Area	125,000	—	—

8.9 To establish the numbers available for work in each planning district, account was taken of the proportion of economically active to total population at 1981, the increasing number of young people likely to be attending higher education after 1981 and the expected employment characteristics of each district at 1991. A comparison of the numbers likely to be economically active at 1981 and 1991A, by divisions of the region, is shown in Table 8.3 below:

Table 8.3 Economically Active 1981–1991A

(thousands)

	1981		1991A		Change 1981–91A
	Persons	% of Pop.	Persons	% of Pop.	Persons
Greater London	3,675	50	3,694	50	19
OMA	2,848	46	3,170	46	323
OSE	2,163	42	2,471	43	308
Region	8,686	46	9,336	47	650

8.10 The numbers available for work would therefore, according to this estimate, increase in the 10 year period by just over twice the increase in the previous 15 years. Thus the expected labour shortage in the region in the 1970s (see chapters 2 and 7) is expected to be much reduced in the 1980s. Further, instead of London's resident labour force continuing to decline, it would slightly increase.

8.11 For testing this hypothesis it was assumed that the numbers travelling to work in Greater London from the rest of the region would increase by about 70,000 in the 10 year period. Elsewhere in the region it was assumed that employment growth would follow trends established in the period up to 1981 with some adjustments in the light of the activity rates which had been forecast and judgments about the growth potential of particular groups of industries in each district. The resulting estimate of employment at 1991A, compared with the employment position at 1981, by divisions of the region, is shown in Table 8.4 below:

Table 8.4: Employment 1981–1991A

(thousands)

	1981	1991A	Change 1981–91A
Greater London	4,083	4,149	66
OMA	2,484	2,811	327
OSE	2,027	2,352	325
Region	8,594	9,312	718

8.12 The most significant change is the growth in numbers of jobs in the OSE which is much larger between 1981 and 1991A than in the previous 15 years and as large as growth in the OMA. By contrast, new jobs in the OMA are about one quarter fewer than in the previous 15 year period, while Greater London, which is expected to lose a considerable number of jobs between 1966 and 1981, may experience a gain. Estimated employment change between 1981 and 1991A, and estimated employment at 1991A, are shown in Figure 26.

## Housing

8.13 It was assumed that household sizes would remain unchanged during the 1980s and that therefore an additional 42,000 houses a year would be required in the region, divided almost equally



between the OMA and the OSE. If the most recent rate of housing completions is maintained (87,000 dwellings in the South East for each year 1966-68), there should be no problem in meeting a demand for an additional 42,000 dwellings annually, and further acceleration in the rate of slum clearance and redevelopment generally should be possible. However, concentration of building activity in a limited number of major growth areas would pose administrative and logistical problems and achievement would depend on strong organisation in each. South Hampshire, the Milton Keynes area, South Essex and the Reading/Aldershot area would, between them, require about 19,000 new dwellings annually over the period 1981-1991A for their rapidly expanding populations.

## Transport

8.14 The level of total transport demand for the planned distribution of people and jobs was estimated for 1991A, as for 1981, using assumptions about incomes, cost of travel, cost of parking, etc. It was estimated that a total of 8.76 million cars would be owned in the south East in 1991A, compared with 7.2 million ten years previously, but that the rate of increase of car ownership would be appreciably slower, only 2% per year compared with 5.7% per year over the 15 years 1966-81. The number of trips likely to be made for all purposes daily (and calculated in the same way as the 1981 figure) was estimated at 41.1 million, compared with 36.0 million in 1981.

8.15 In the case of the railways it was assumed that the basic network would not be changed (see Chapter 6). An investment budget to cover improvements to the lay-out was assumed, after consultation with British Rail. This was allocated by the team to, among other things, electrification of the Great Northern and Midland lines, to the north of London, and of the Hastings and East Grinstead lines, to the south. It was also assumed that, in the course of replacement of obsolete equipment, better rolling stock would be introduced and that a similar process of replacement, especially of signalling equipment, would result in more uniform and more integrated control of train operations. This would allow a general speed increase of 5-10% with higher standards of comfort and regularity.

8.16 The road network for the 1991A strategy was, in part, designed to overcome deficiencies revealed by the 1981 test. It was assumed that average annual expenditure on inter-urban roads would be about 30 per cent higher than between 1966 and 1981 in terms of present prices. Within this budget, a further 285 miles of inter-urban motorways and 750 miles of dual carriageways could be provided. The network tested should not, however, be regarded as the equivalent of a full-scale highways plan, since it excluded urban roads except where approximate representation of them was necessary for technical purposes, and the budget for new work and improvements covered inter-urban routes only. In the case of London it was assumed that road works equivalent to those included in the Greater London Development Plan would be carried out.

8.17 Major features of the 1991A road network (see Figure 27, which shows the main categories of roads, e.g. motor ways and other dual carriageways, and does not deal with simple changes in capacity, i.e. extra traffic lanes and grade separation at junctions, involving no change of category) were additional motorways on the northern and eastern sides of London. One motorway would form a link between the M1 and the orbital route to the west of London. Another would diverge from the M1 north of Luton and head in a generally south easterly direction to the Brentwood area and thence on to Southend, the mid-section running roughly parallel to Ringway 3. Two further motorways would cross Essex, one a radial route to Southend, the other a relief for the A12. An additional Thames crossing east of Tilbury, perhaps in the form of a high single-span bridge, seemed likely to be justified and was therefore included. South of the Thames a new radial motorway would link with the M2 motorway. Major works were also considered necessary between Reading, Farnham and London; on the approaches to Southampton; and in the Oxford area, on the route from Swindon to Bedford.

8.18 The tests indicated a possible increase in the total number of rail passengers, but a slight fall in numbers commuting to the Central London termini, coupled with some increase in average journey lengths. The standard of rail service, in terms of speed, regularity and comfort, would be significantly improved.

8.19 The use of cars generally was thought likely to increase by about 20 per cent, against a decline in the use of buses.

8.20 Although the need to provide satisfactory levels of service was a main factor in the design of the 1991A roads network, this was not in fact achieved everywhere. Difficult or largely unsatisfactory driving conditions were indicated on a number of routes, including the M40 to Oxford and the M13 to Southend, although in both instances conditions might not in practice be as bad as this, since some of the traffic would use alternative routes. Similar conditions were indicated on short lengths of other routes, mainly in the OMA, chiefly west of London; on parts of Ringway 3; and notably on the proposed new motorway between the M1 near Luton and the north orbital near Rickmansworth; also on the proposed new Thames crossing east of Tilbury. In general however it seemed that the 1991A inter-urban network would give satisfactory service in normal week-day conditions.

## 1991B

8.21 It was recognised that in the time available it would be impossible to undertake thorough tests of more than two hypothetical patterns of development at 1991. A number of theoretical patterns were therefore considered, ranging from large-scale peripheral expansion of London to a general scatter of development throughout the region, with the intention of finding a logical and feasible distribution of development for the period to 1991 which could be contrasted with 1991A and which should therefore be markedly different from it. The 1991A strategy included the build up of large urban concentrations on the main radial routes from London near the regional boundaries. It seemed reasonable that the alternative 1991B hypothesis should place greater emphasis on development closer in to London, i.e. emphasizing the London metropolitan region, where it appeared additional employment might become more readily available than in some of the more remote growth points envisaged in 1991A. There were however features in 1991A which the team, as a result of the analyses described in previous chapters, considered should be retained. These included the emphasis on a limited number of growth areas and, complementary to that, protection of broad areas of countryside.

## Population

8.22 In devising this alternative strategy, particular attention was paid to the strength of recent trends, most notably the steady decline in Greater London's population and the composition of migratory flows of people and firms from London. It seemed reasonable to assume that the population of Greater London would continue to fall, and a figure of 7 million, which assumed a decline of 300,000 during the 1980s, was therefore adopted for 1991B. It also seemed reasonable to examine the repercussions of substantial population and employment growth near London. The movement of many factories and offices both within and out of London has, in the past, been over short distances. Moreover, least skilled workers appear not to have shared proportionately in recent population movements out of London but have remained concentrated around Central London, especially to the north and east. Development near London might help the renewal and improvement of London's environment, particularly in overcrowded and socially stressed areas, by promoting a 'loosening up' process around central and east London through encouraging the dispersal of firms unable or unlikely to move long distances.

8.23 In the 1991A strategy some of the additional population was allocated to new developments just outside the region, but for 1991B, in line with the general philosophy outlined above, all the additional population was allocated within the South East region. As the population of Greater London was assumed to decline to 7.0 million, this left 1.785 million to be allocated to the OMA and OSE compared with 1.293 million (nearly 0.5 million fewer) in 1991A.

8.24 South Essex appeared to be a most suitable area for development closely linked with London. Much outward movement from London, both of firms and people, follows a radial pattern. South Essex is in the same sector as those parts of Inner London with the most pressing social problems, and the north-eastern side of Inner London has a considerable amount of manufacturing industry which is

not essential to the functioning of Inner London (see Chapter 2); which occupies obsolescent premises; and which depends heavily on semi-skilled labour. The population of South Essex has however been growing by about 10,000 a year over the last 20 years or so, and this fast rate of growth has led to severe transport problems because employment growth has not kept pace with the movement of population thereby causing a high level of commuting to London. Nonetheless it was decided that new roads and redevelopment as part of a new plan for the area would offer opportunities for restructuring, and that in such circumstances an extra 200,000 population might be accommodated during the 1980s involving a doubling of the pre-1981 growth rate and resulting in a total population of about 950,000 at 1991B. Whether the Essex sector of the Metropolitan Green Belt would be affected by such proposals would depend on the form of development adopted, but it was decided that the 1991B test the additional population should be concentrated closer to the Greater London Boundary than the area's 1991A population.

8.25 Similar development near to London might take place in North Kent, which, like South Essex, already has a variety of ties with Inner London. It was however considered unlikely that two major development schemes on Thames-side would proceed at the same time and at the same pace. The team therefore allocated to North Kent a population growth of about 100,000 in the decade to 1991B, the assumption being that a higher level of growth might follow in the 1990s.

8.26 Rapid growth in South Essex, coupled with the possibility of similar growth across the Thames linked to south Essex by a possible new river crossing, would add to the need for substantial improvement of communication routes linking Thames-side to the Midlands and the North, avoiding Greater London. It seemed that this might create some justification for development along a new axis tangential to London. Population growth of about 250,000 in total was therefore allocated to various points along the proposed route, the largest increases going to the neighbourhood of junctions with the main radial routes, particularly to the Harlow/Bishop's Stortford area (130,000).

8.27 It was also decided that more growth than envisaged in the 1991A strategy might be considered beyond the Metropolitan Green Belt, to the west of London, providing relief for some of the pressures exerted by growing industries both within and outside the Greater London boundary. In the team's view an opportunity might well exist for comprehensive re-structuring of the cluster of fast-expanding towns in the Reading/Aldershot area, perhaps with a new major centre. Growth of about 200,000 was therefore allocated to the area for 1991B.

8.28 Elsewhere in the OMA population allocations were little different from those in 1991A since the same general constraints and objectives applied. It was however, considered unlikely that rapid growth up to 1981 in areas within or close to the Metropolitan Green Belt could be suddenly halted, and that some continuity of growth, particularly in that part of the commuter belt between Woking and High Wycombe, should be allowed for. This continuity might however in the event be provided by a slightly slower rate of growth during the 1980s which could be extended through the 1990s.

8.29 A comparison of the population distributions at 1981 and 1991B by divisions of the region is given in Table 8.5 below:—

Table 8.5: Population 1981–1991B

(thousands)

	1981	1991B	Change 1981–91B
Greater London	7,336	7,000	–336
OMA	6,190	7,222	1,032
OSE	5,161	5,914	735
Region	18,687	20,136	1,449

Population growth over the period 1981–1991B, by planning districts, is shown in Figure 28.

8.30 For the 1991B situation, as for 1991A, it was assumed that every effort would be made to move employment wherever possible to the outer parts of the region to facilitate the creation of centres of sufficient size to act as new centres of counter attraction to the London area. South Hampshire was considered to have the greatest prospect of success a major regional growth centre because it already has a strong economic base, because it is expected to have a population of about 1 million by 1981 and because, in any event, further population and employment growth seems most likely to occur in the area without special assistance to bring this about. It was therefore decided that a population increase of 250,000 in South Hampshire should be tested, a doubling of the pre-1981 rate of growth.

8.31 The only other major growth centre at present planned in the OSE is Milton Keynes. Since the team had decided against allocating population at 1991B across the regional boundary (at Northampton and Wellingborough) it seemed reasonable, instead of accelerating Milton Keynes growth, as proposed in 1991A, to revert to the existing programme for the new city's development, namely an increase in population of about 80,000 in the decade to 1991. A comparison of the population distributions at 1981 and 1991B in the proposed major growth areas is given in Table 8.6 below:—

Table 8.6: Major Growth Areas 1991B

			population	
		Change 1981 – 91B	% change	
			1991B total	
OMA	South Essex/Chelmsford	240,000	27	1,150,000
	Reading/Aldershot Area	200,000	30	900,000
	Essex/Herts border	140,000	37	500,000
	Medway Kent	100,000	20	650,000
OSE	South Hampshire	250,000	25	1,250,000
	Milton Keynes Area	80,000	—	—

Note: The population of the Chelmsford district would be about 200,000 and of South Essex about 950,000.

### Labour Force and Employment

8.32 To establish the numbers available for work in each planning district at 1991B, the team followed the same procedure as for 1991A but it was decided that the outflow of population from Greater London would result in a slight reduction in the proportion of the economically active in the remaining London population. Table 8.7 compares 1981 and 1991B:—

Table 8.7: Economically Active 1981–1991B

					(thousands)
		1981		1991B	
		Change 1981–91B			
		Persons	% of pop	Persons	% of pop
Greater London		3,675	50	3,467	49.5
OMA		2,848	46	3,365	46
OSE		2,163	42	2,565	43
Region		8,686	46	9,397	46

8.33 The same procedure as for 1991A was also used to establish the numbers employed in planning districts at 1991B, with this difference. It was assumed that development closer in to London than envisaged at 1991A would encourage more movement out of London by firms unlikely to move over long distances. The decision was taken therefore to examine the consequences of a reduction of a

quarter of a million in the number of jobs in Greater London, compared with a growth of 66,000 in 1991A, and a compensating increase in numbers of jobs in the rest of the region, principally the OMA. The results, by divisions of the region, are set out in Table 8.8:—

Table 8.8: Employment 1981–1991B

	(thousands)		
	1981	1991B	Change 1981–91B
Greater London	4,083	3,833	–250
OMA	2,484	3,143	659
OSE	2,027	2,421	394
Region	8,594	9,397	803

The estimated employment change between 1981–1991B and estimated employment at 1991B are shown in Figure 29.

### Housing

8.34 The problem would remain more or less as at 1991A except that more house building would be needed outside London to cope with the increased outflow of people.

### Transport

8.35 Estimates of the level of demand reflected the fact that a slightly larger population would be accommodated within the South East at 1991B than at 1991A. Thus, the number of cars owned within the region might be 8.84 million (compared with 8.76 million at 1991A) and total daily trips might total 41.6 million (compared with 41.1 million).

8.36 It was assumed that the rail network would be the same as for 1991A, although services would be adjusted to suit the 1991B land uses. In the case of the road network devised for 1991B (see Figure 30), this was arrived at by adjusting the 1991A network in the areas with the most important changes in land uses, within the same total budget. The principal difference between the network selected and that for 1991A was re-alignment of the motorway diverging from the M1 north of Luton and running towards Southend. In 1991B this route crossed Hertfordshire further to the north than in 1991A, nearer to possible sites for employment and population growth. In addition a number of lesser changes were made, in route categories and in the assumed capacities of certain links in the network.

8.37 The numbers travelling to work in Central London by rail would be fewer than at 1981, primarily because the numbers working in Central London would be reduced. There would be significant reductions in the numbers arriving at the termini on the heavily loaded Eastern and Southern lines; but, in contrast, there would be increases in the numbers arriving at the northern and western termini, the increases in commuting being wholly from the OSE. Thus the standard of service on the railways would be better than for 1991A.

8.38 In general, service standards on the inter-urban roads network would be about the same as for 1991A (see paragraph 8.20).

### 1991B(2) Alternative Assumption

8.39 The 1991B hypothesis included an assumption that between 1981 and 1991 there would be a drop of a quarter of a million in the numbers of people working in Greater London. If demand for labour in fact remained strong in London, this drop might not occur, especially as emphasis was placed

in 1991B on new development within the OMA. The team therefore decided that a test should be made on the assumption that hardly any reduction in employment might occur in London, i.e. that 1991B would fail in one major element. To make up for this the numbers of jobs elsewhere in the region were reduced in the light of the expected capacities on commuter lines at peak journey to work hours. By comparison with 1991B the result, by divisions of the region, was as follows:-

Table 8.9: Employment 1991B and 1991B(2)

	(thousands)	
	1991B	1991B(2)
Greater London	3,833	4,065
OMA	3,143	2,898
OSE	2,421	2,416

8.40 The effect of this would be to add a flood of commuters to the railway system. In such circumstances although the London Midland and Western Regions of British Railways, and also the central division of the Southern Region and the King's Cross division of Eastern Region, might be expected to cope, heavy additional expenditure would be needed in the south-east division of Southern Region, for new rolling stock and signalling works; in the south-west division of Southern Region, where major works would probably be required on the entire length of the main route through London and at Waterloo; and in the Liverpool Street division of the Eastern Region.

8.41 Another effect of this alternative assumption (1991B(2)) would be to worsen conditions substantially on the roads approaching London. The journey to work loadings on the network might increase overall by only two per cent but loading to the north-east of London (up seven per cent) would be much heavier than to the south. The test indicated a sharp deterioration in the standard of service which would be provided by the main road network especially on motorways and dual carriage-way roads. The most difficult problems would occur in South Essex, the Reading/Aldershot area and on the M3. There would also be problems in North Kent and South Buckinghamshire. The difficulties in South Essex would however be most acute on both road and rail. This would call either for changes in investment, necessarily involving higher costs, in addition to deteriorating environmental conditions, or significant changes in the distribution of population.

## Summary

8.42 There were two main differences between the 1991A and the 1991B hypotheses. First, in 1991A it was assumed that Greater London's population would be stabilised at the forecast 1981 figure, 7.3 million, while in 1991B it was assumed that the population would continue to fall, to 7.0 million, and also that the number of jobs in Greater London would fall substantially. Second, although both hypotheses concentrated growth in a limited number of areas, 1991A tended to emphasise growth on the fringes of the region, notably in the Milton Keynes/Northampton-Wellingborough area, while in 1991B more growth was concentrated in the OMA, notably in the Reading/Aldershot area, South Essex, North Kent and also, unlike 1991A, on the Essex-Hertfordshire border. The extent to which the two hypotheses achieved the provisional objectives, described in Chapters 1 to 6, was the subject of the evaluation process, described in the next chapter.



EVALUATION

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9.1 As explained in the introduction to this report (see Chapter 1), the team soon recognised that a 'master plan', or detailed picture of the region at some particular date in the future, would serve little purpose. First, the recommended strategy must be sufficiently generalised to allow for interpretation by the planning authorities in the light of local conditions, and flexible enough to allow for different levels of population and employment growth. Second, previous regional plans had demonstrated the impracticability of accurately forecasting the scale and rate of change of such growth for more than a few years ahead. Third, the operative decisions in many fields are taken otherwise than by Government and local authorities. Recognition of these circumstances led to the conclusion that the team's recommendations must take the form of regional objectives and measures to achieve these and an indication, in broad outline, of the pattern of development which might result from their adoption and which would facilitate their achievement.

9.2 As there seemed no justification for adopting objectives, other than the general one of seeking to make the best use of the region's resources (see Chapter 1) prior to a reappraisal of the present position and prospects, the team began its work by making an examination of various aspects of regional significance (see Chapters 2–6). These studies led to the formulation of a number of provisional objectives and measures for their achievement.

9.3 Although the concept of a 'master plan' had been rejected, it was clearly necessary to consider in some detail the different patterns of development which might result from evolution of the existing pattern in various ways. As previously explained (see Chapter 7), current plans already provide for substantial changes in the region for some years ahead. Some modification of these, in the light of changing circumstances (notably possible development of a Third London Airport) or to support the team's recommendations for a strategy looking to the end of the century, is both possible and desirable, although the room for manoeuvre, without causing widespread disruption and delay, is inevitably restricted. Assuming that the pattern at 1981 was, to a large extent, fixed, the team devised a number of hypothetical strategies based on this. The two strategies eventually chosen for testing have already been described (see Chapter 8), together with some of the conclusions reached in examination of them.

### The Method

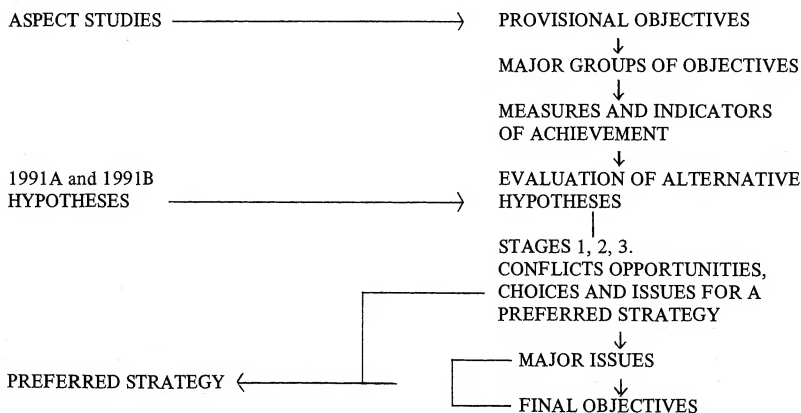
9.4 Having thus formulated a number of provisional objectives and two hypothetical strategies at 1991, the next step was to evaluate the two strategies, to assess both the extent to which they enabled the objectives to be achieved and their feasibility. The team recognised that whatever process was adopted might not yield definitive answers. First, although evaluation was primarily concerned with a comparison between 1991A and 1991B (and the transport tests were specifically designed to compare the transport results of the different land-use patterns), the intention was that the evaluation process should assist in identifying major issues and in deciding upon final objectives (in the light of tests of the provisional objectives) and a preferred strategy related to these. It was not intended that the choice of a recommended framework should lie between 1991A or 1991B. Second, although the team sought to be systematic in its approach, the methods used were experimental and tentative, since methodologies for analysing and evaluating alternative strategies at regional level are in their infancy.

9.5 Such analytical techniques as are available and relevant pose problems when attempts are made to apply them to a regional strategy. Various adaptations of cost-benefit techniques have been devised to

deal with the multiplicity of projects involved in town and country planning. These are difficult to apply on a regional scale because of the very large number of variable factors and because of difficulties over quantification. A different problem arises in the case of cost effectiveness, which is a method of selecting the best way of achieving a given objective. In a regional strategy there can be no single objective but a number of objectives whose relationships one with another inevitably change in the course of evaluation.

9.6 The process eventually evolved by the team is described below (para 9.7). It involved using such measures as seemed appropriate in each case to assess how effectively the provisional objectives were likely to be achieved in the 1991A and 1991B strategies. Throughout, the team was helped by the views expressed by the local planning authorities on the two strategies described in the team's interim report published in December 1969.

9.7 Preliminary steps were to group related provisional objectives; to define the measurements by which the achievement of these grouped objectives might be assessed; and to prescribe the areas over which the assessment might be made. The first stage of the evaluation process proper was to establish the extent to which the differences between 1991A and 1991B made one strategy, or parts of one strategy, preferable to the other in terms of the objectives considered separately. The second stage was to establish, at the level of planning districts or groups of districts, the limits of population growth which seemed generally acceptable in terms of the various objectives, now considered in relation to each other. This stage thus led on from a comparison between 1991A and 1991B to an indication of a preferred strategy. The third stage was concerned primarily with the areas of conflict, a conflict being noted where further growth seemed possible or desirable in the light of one or more objectives but undesirable in the light of another or difficult in terms of feasibility. To resolve these conflicts it was necessary for the team to weigh the objectives in relation to each area, and to reach an agreed view on their relative importance in each area separately. It had been thought that it might be possible to resolve conflicts and to weight the various objectives regionally, but the inter-relationships proved so complex that an overall, mathematical system of weighting could not be adopted. Local conditions and needs, the possibility of compensating for limited success in achieving a particular objective by development in some other place or in some other way and the need to make provision for a possible additional population of about 4½ million by the end of the century were therefore, in most instances, the decisive considerations. At this stage the team also assessed the short and long-term (ie pre-1981 and post-1991) implications of the emerging strategy and the extent to which the groups of objectives seemed likely to be achieved at the regional level. The diagram below illustrates the process:



## Preliminary steps

9.8 To facilitate evaluation, the principal provisional objectives (see Chapters 2-6) were grouped as follows:

### Economic Objectives

summarized as provision for growth centres of sufficient size and compactness to provide adequate labour markets for both employers and workers, without posing journey to work and congestion problems.

### Provisional Objectives

- (a) To enable the best use to be made of the region's labour resources and to provide for an efficient distribution of employment within the region (People and Jobs, Chapter 2, paragraph 2.5);
- (b) To match as far as possible population and employment growth (People and Jobs, Chapter 2, paragraph 2.21);
- (c) To provide scope for the expansion of the specialised role of Central London as a national and international centre for administration, finance, commerce, tourism and culture (People and Jobs, Chapter 2, paragraph 2.56);
- (d) To provide for a settlement pattern which permits (a) the satisfactory evolution of the London metropolitan region, covering London's main labour catchment area and (b) the growth of population and employment in centres outside the metropolitan region (Town and Country, Chapter 4, paragraph 4.8);
- (e) To provide for a settlement pattern in which development would generally be concentrated rather than dispersed and capable of supporting central place functions which, within the metropolitan region, would complement the attractions of Central London and which, outside the metropolitan region, would be on a sufficient scale to enable the selected city regions to be (economically) largely self-contained (Town and Country, Chapter 4, paragraph 4.11).

### Social Objectives

summarized as provision for improved housing, environmental standards and community facilities generally and particularly for less privileged inner London residents; and provision for growth centres with a wide range of community facilities.

### Provisional Objectives

- (a) To suggest broad areas for development to provide for
  - i. expected population increases and changes in household sizes;
  - ii. a wide variety of housing requirements by all sections of the community; and
  - iii. improved environmental standards in both new developments and existing urban areas. (People and Homes, Chapter 3, paragraph 3.7);

- (b) To encourage or promote decentralization from Inner London, so that redevelopment of obsolescent housing, modernisation of community facilities, and improvement of the environment generally in Inner London, may be undertaken (People and Homes, Chapter 3, paragraph 3.33);
- (c) To give to groups among the semi-skilled and unskilled workers remaining in Inner London, and suffering from multiple disadvantages, an appropriate measure of priority (a) in housing, and (b) in additional provision of educational and occupational training facilities of all kinds (People and Homes, Chapter 3, paragraph 3.35); and
- (d) To promote the development of large centres to facilitate provision of a wide range of health, welfare and educational services, together with a wide range of job opportunities (People and Homes, Chapter 3, paragraph 3.38).

### Countryside Objectives

summarized as provision for the greatest possible benefit to be derived from the countryside. (Town and Country, Chapter 4, paragraph 4.41).

### Provisional Objectives

- (a) To allow for the conservation and enhancement of areas of high landscape value, including much of the coast line, and areas with features of natural, historic and architectural interest, especially where these are found in combination (Town and Country, Chapter 4, paragraph 4.29);
- (b) To provide more scope of open air recreation requiring extensive areas of land (Town and Country, Chapter 4, paragraph 4.31);
- (c) To identify those areas where conditions are particularly suitable for the further promotion of agricultural productivity and to provide for the protection of these areas from encroachment by inappropriate land uses (Town and Country, Chapter 4, paragraph 4.19);
- (d) To avoid sterilization of mineral resources by other development and to allow, except where this is wholly incompatible with other countryside objectives, for the orderly extraction of minerals, especially those in short supply or of national significance (Town and Country, Chapter 4, paragraph 4.24);
- (e) To safeguard natural water resources in the region, both in quality and quantity, so that the scale on which water needs to be imported into the region is not increased (Town and Country, Chapter 4, paragraph 4.26);
- (f) To maintain the social and economic welfare of small settlements in the countryside (Town and Country, Chapter 4, paragraph 4.14).

### Transport Objectives

summarized as provision for the greatest possible ease of movement within the region and the greatest possible net benefits for transport users. (People and Movement, Chapter 6, paragraph 6.41).

- (a) To steer development which does not specifically require such a location away from land adjacent to deep sea water (People and Movement, Chapter 6, paragraph 6.11);
- (b) to allow for a small number of regional airports (perhaps four in all), complementary to the

three London Airports, and sited in relation to the settlement pattern of the South East and adjoining regions (People and Movement, Chapter 6, paragraph 6.20).

## Feasibility

summarized as to produce a feasible regional strategy

## Provisional Objectives

- (a) To stimulate, as appropriate, the mobility of employment within the region and to encourage, in particular, the further dispersal from London of employment, in both the manufacturing and service industries, which can be located satisfactorily elsewhere (People and Jobs, Chapter 2, paragraph 2.55);
- (b) To be sufficiently flexible to allow for changes either up or down in the levels of population and employment growth in the region (People and Jobs, Chapter 2, paragraph 2.4); and
- (c) To provide for the most efficient use of investment in public utilities, especially in the phasing of new developments (Public Services, Chapter 5, paragraph 5.16).

9.9 The provisional objectives ranged from the general to the particular. The measurements used to assess their achievement were necessarily no less disparate. In some cases, notably transport, costs and benefits could in principle be measured in some detail. In others, for example housing, benefits were less readily quantifiable but costs could be estimated. One problem was that cost differentials between the two strategies were not always revealed at regional level since cost variations (eg in drainage, water supply, local roads, town centre capacities) can only be identified as a result of studies at the local or sub-regional level. In some cases accessibility proved to be a useful indicator of benefit and this was used to measure, among other things, the relationship of population to jobs (revealing the possibilities of choice between jobs), jobs to population (indicating the potential extent of the labour market) and population to recreation areas. When quantification proved to be particularly difficult, if not impossible, the team could only use its best judgment unaided by quantification.

9.10 Despite the fact that some of the objectives and the measures used to assess their achievement had no spatial connotations, the team decided that evaluation primarily in relation to specific areas was necessary and desirable, since one of the most important features of the recommended strategy must be the determination of areas for population growth. The standard unit used was the planning district.<sup>1</sup> Where measurements were made below district level (eg for transport), the results were aggregated. Where districts themselves proved too small for meaningful results, the results were aggregated to sub-divisional or divisional level.<sup>1</sup>

## Stage I

9.11 The aim at this stage of the process (see before, paragraph 9.7) was to establish whether the differences between 1991A and 1991B made one strategy, or parts of one strategy, preferable to the other. The evaluation was in terms of the groups of objectives previously listed. No attempt was made, at this stage, to consider the inter-action of the objectives or to deal with any conflicts. Indeed it seemed desirable to delay for as long as possible such considerations not only because it was believed (as the evaluation eventually demonstrated) that in many areas there would be no significant conflicts but also because it was thought that assessments in terms of individual groups of objectives would help to clarify the main issues and areas of conflict.

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1 See Figure 36. For definitions of planning districts and of divisions and sub-divisions of the region see Appendix B.

9.12 Both hypothetical strategies envisaged concentrations of population and employment growth, the emphasis in 1991A being on those somewhat further from London than in 1991B. The full costs and benefits of concentration could not be measured but the team considered the size and growth prospects of existing and planned major employment centres; the likely accessibility of population to jobs and of jobs to population; and the degree of self-containment (expressed as the proportion of residents in any district who also work there) likely to be achieved. Although this examination did not suggest that one strategy should be preferred to the other, it did underline the opportunities for growth in South Hampshire, South Essex, the Crawley area, the Reading/Wokingham/Aldershot/Basingstoke area and some parts of the northern half of the OMA.

9.13 An obvious difference between 1991A and 1991B was that the second assumed a smaller population in Greater London, and this might facilitate the urban renewal which is urgently required, particularly in Inner London. It is very difficult to say what Greater London's housing capacity would be at 1991 (see Chapter 8), especially since there may be some potential for adding to London's housing capacity by developing land at present not available or allocated for this purpose. Clearly, however, the level of population should be related to the achievement of adequate housing and environmental standards. The team, therefore concluded that either the upper 1991A or the lower 1991B level of London's population might prove acceptable in terms of this group of objectives. Outside Greater London, measures of the accessibility of job opportunities for particular social groups suggested, first that areas immediately to the west of London offered significant opportunities for population growth, especially since a number of places in an arc running from central Hertfordshire through the outer suburbs of west London to Crawley may continue to experience labour shortages in the 1980s, and second that South Essex offered significant opportunities for employment growth, since growth of employment has to date lagged well behind growth of population in this area and could be linked with needed improvement in housing and environmental conditions in Greater London. On this basis 1991B seemed preferable in so far as it explicitly provided for a higher proportion of population and employment growth closer in to London than 1991A, thus offering opportunities for the outward movement of less skilled workers with their jobs. So far as the other social objectives were concerned, no appreciable difference was discerned between the two strategies.

#### Countryside objectives

9.14 The team assessed the pressures on the region's countryside which the main population growth centres in the two strategies might be expected to exert. In addition, accessibilities between these centres and different environmental resources were measured, although it was recognised that the results required careful interpretation in view of the conflict between the desirability of enabling as many people as possible to enjoy good environment and the need to preserve certain environments from over-crowding. The team concluded that increased pressures on the countryside were inevitable and that, in this respect, there was little to choose between the two strategies. On balance, countryside considerations indicated that population growth in the southern half of the region should be preferred to growth in the northern half and growth in the OSE should be preferred to growth in the OMA (as in 1991A).

#### Transport objectives

9.15 Measures used in testing the 1991A and 1991B strategies (and also the 1981 position, see Chapter 7) included estimates of numbers of peak and off-peak trips between traffic zones (parts of planning



districts) both by road and by rail. Some of the findings were indicated earlier (see Chapter 8). Several different criteria were used to evaluate the alternative traffic predictions and all showed that, taking the region as a whole, there was little to choose between the strategies. Although the 1991B strategy envisaged four per cent more population and eight per cent more employment in the region outside London than 1991A, the effects of this (more urban and inter-urban traffic outside London in the region) were countered by a probable slight reduction in traffic problems arising wholly within Greater London. A comparison of the operational performance of the road and rail networks demonstrated that the margin between the strategies was too narrow for either to be preferred and this was confirmed by analyses of the total costs (both time and money) consumed by travel in each strategy. A third analysis attempted to compare the net changes in benefit arising from improvement of the inter-urban road network. This showed an advantage for the 1991B strategy, but it could not be demonstrated that the advantage was clearly likely to outweigh other identifiable but unmeasurable differences between the strategies. As a rough guide to a preferred strategy the transport tests suggested, in broad terms, that growth within the OMA close to London, while not posing difficulties everywhere, would throw up problems in a number of key sectors, particularly towards the end of the century.

## Feasibility

9.16 Both the 1991A and 1991B strategies implied a considerable amount of employment growth in addition to indigenous growth in existing industries and services at the various places selected for substantial population growth. Whilst accepting that employment estimates for as far ahead as 1991 must be treated with caution (see Chapter 2), the team calculated that 14,000–17,000 mobile jobs in manufacturing industry would be required annually if severe imbalances between population and employment growth were to be avoided at 1991A, and that 16,000–20,000 would be needed if similar imbalances were to be avoided at 1991B. However, the supply may be limited. If past trends continue and policy remains unchanged, it was further calculated that only about 10,000–12,000 such jobs would be available in the South East each year up to 1991, and not all of these could be relied upon to resettle in accordance with the pattern of development envisaged. The team also calculated that 15,000–20,000 mobile office jobs would be required by both strategies annually. Past trends indicated that 10,000 only might be available each year. Because the 1991A strategy appeared to be less dependent on mobile employment, it might for this reason, seem preferable to 1991B. However, the 1991A strategy required employment growth somewhat further from London, and this was judged more difficult to achieve, since many jobs are mobile over relatively short distances only. This is particularly true in the case of offices and past experience indicates that, even though office growth in centres such as Reading and Southend may be important locally, the main movement of offices has been over very short distances. Moreover, the requirement in 1991A for employment growth further away from London might conflict with competing claims for mobile jobs from outside the region. The team concluded first, that the recommended strategy must seek to minimise dependence on mobile jobs, and in particular on jobs potentially mobile over long distances; second, that the success of small growth centres on the fringes of the region must be regarded as doubtful.

9.17 In terms of flexibility there seemed little difference between the strategies because the population growth in both lay within the capacities of the areas selected for such growth. However, 1991A seemed marginally preferable because, by assuming a larger population in London and some growth beyond the confines of the region, it made allowance for accommodation of a wider range of population and employment levels in the OMA and the OSE.

9.18 Finally, the team concluded, after analysing possible growth of public expenditure, that neither the 1991A nor the 1991B strategy would make unreasonable demands on the scale of public investment in the light of the expected population increase. Much expenditure, on housing for example, would be common to both strategies and, so far as could be ascertained, the rate of increase of total public expenditure within the region would be broadly in line with the anticipated increase in national

resources, whether the pattern of development evolved as at 1991A or at 1991B. (This matter will be dealt with, in more detail, in Studies Volume IV.)

## Stage 2

9.19 The next stage of the evaluation process was to examine individual planning districts or groups of related districts in the light of the population figures which had been allocated to them in the 1991A and 1991B strategies. This enabled the team to identify main areas of opportunities for growth (in the light of one or more objectives) and the main areas of difficulty (that is of conflict or feasibility problems). The term 'planning areas' has been used, for convenience, to describe the districts or groups of districts considered and has no significance for local government boundaries (see Figure 37). Planning areas mainly in the OMA are considered first.

### OMA North Kent—Planning Area 2 (Planning districts 20, 21, 22, 24, 25).

This area should offer some scope for the relief of London's social and housing problems and existing urbanization in the Maidstone/Medway area could provide a suitable base for concentration of population and employment growth. Countryside resources (the North Downs; mineral extraction; fruit growing areas; nature conservancy) are, however, already under pressure which would be substantially increased if access from South Essex was improved. From the transport point of view, even the lower 1991A population figure seemed doubtful because of railway capacity difficulties and problems (environmental and budgetary) of providing adequate road approaches to London along Thames-side; self-contained development in the Medway/Maidstone area would, however, be acceptable.

### South-west Kent—Planning Area 3 (Planning district 23).

The area might be attractive for offices moving out of London and such development would tend to reduce commuting flows, but any significant increase in commuting would pose transport difficulties. Much of the area is within the Metropolitan Green Belt.

### Crawley—Planning Area 6 (Planning District 33).

The Crawley area has considerable potential for employment growth (Gatwick; the New Town's expanding industries; easy accessibility to London and Brighton) and there would probably be spare capacity on both rail and roads in 1991. However, further large-scale growth would pose problems of urban form (Gatwick's noise shadow; the need to conserve fine landscape to the south of Crawley; the preference, on the transport side, for development along the main north-south transport routes) and of surface drainage (since additional development in the Mole catchment area would increase the dangers of flooding down-river, notably in the Molesey area).

### Staines/Woking/Guildford—Planning Area 7 (Planning districts 40 and 41).

Substantial population growth was envisaged in the 1991B strategy, but problems arising from the high rate of development anticipated before 1981 and the need to conserve the centres of Guildford, Godalming and Farnham suggested that growth should be restricted after 1981 in this area.

### Reading/Wokingham/Aldershot/Basingstoke—Planning Area 8 (Planning districts 53, 50, 42, 43).

Large-scale development, greater in 1991B than in 1991A, was envisaged in both strategies and the desirability and likely feasibility of such development was generally accepted by the team, although it was recognised that future urban form and planning of development would raise difficult issues, in view of infrastructure, defence land and surface drainage problems in parts of the area. A conflict was noted over the preference, on transport grounds, for growth away from the potentially congested road network near Greater London, so that additional commuting to Central London, which would also create railway capacity problems, might be avoided, and the preference, in the light of the social

objectives, for growth as closely related to west London as possible, so that short distance decentralisation of employment and population might be encouraged.

#### Aylesbury—Planning Area No 11 (Planning district 55).

There is likely to continue to be spare capacity on the railways in this area after 1981 and the area should have potential for employment growth, in part deriving from movement outward from the inner fringe of the OMA. The area's roads are also likely to have spare capacity but in the adjoining area to the east there is likely to be some overloading. The scope for growth in this planning area was therefore considered to be modest.

#### Tring/Watford/St Albans—Planning Area No 12 (Planning districts 60, 61).

This is an area of labour shortage and of employment growth potential, and there would probably be some spare capacity on the railways for commuters after 1981. However the transport tests suggested that the radial roads might be over-loaded; pressures on open-air recreation facilities and good landscape would probably be severe; and from the point of view of regional development it would seem undesirable to provide for sizeable employment growth in a part of the north-west sector which might detract from large-scale growth on the outer fringes of the OMA and in the OSE.

#### Hitchin/Hatfield—Planning Area 14 (Planning district 62).

Since growth further out in the sector was not envisaged, a high rate of growth in this area during the 1980s seemed generally acceptable. This would need to be considered in relation to planning area no 31, adjoining.

#### Luton—Planning Area 13 (Planning district 65).

Both strategies envisaged expansion in this area, which is one of labour shortage and employment growth potential. Transport (local road problems over access to and from the M1) and countryside considerations however indicated that growth should be carefully planned. Also, it should not detract from employment growth further out.

#### Hertford/North-east Herts/Chigwell/Harlow—Planning Areas 15 and 16 (Planning districts 63, 64, 70 and 71).

A high rate of population growth was envisaged in 1991B to test pressures for development arising from a Luton-Southend motorway and incidentally to test the problems of urban growth in connection with the Nuthampstead site for the Third London Airport. There should be no difficulty in encouraging employment movement out from Enfield and the Lea Valley, and transport considerations would favour growth in this area (provided there was no substantial increase in railway commuting). However the area lacks a substantial employment base on which growth might be concentrated; growth in this area might be at the expense of South Essex (see below); and large-scale development would conflict, in varying degrees, with the preservation of extensive areas of open country, mineral extraction, conservation of historic towns, opportunities to increase agricultural productivity and the need to provide more recreational facilities for the north-eastern side of London. To minimise the conflict with countryside objectives, growth in the area might be concentrated closer to Greater London than was proposed in 1991B, ie at Harlow rather than Bishop's Stortford.

#### South Essex/Chelmsford—Planning Areas 17 and 18 (Planning districts 72, 73).

A high rate of population and employment growth was envisaged for this area in both 1991A and 1991B. Serious doubts about this arose, first because failure to match population with employment growth, leading to substantial increases in journeys to work into London, would pose transport (rail and road) problems which would be costly and difficult to overcome without causing no less difficult environmental and urban form problems, although emphasis on growth away from Thames-side towards Chelmsford might relieve these; second because a substantial amount of mobile employment

would be needed since growth of employment to date has lagged behind population growth and South Essex lacks industries growing in terms of employment; third because major rehabilitation and redevelopment schemes within Greater London, on abandoned dock-land for example, might reduce social pressures on the eastern side of London without requiring large-scale overspill into South Essex; fourth because the area has major environmental problems although these might to some extent be overcome if major growth resulted in an improved pattern of development.

**OSE North-east Kent/South Kent/Ashford/South-east Kent—Planning Areas 19 and 20** (Planning districts 26, 27, 28, 29).

Prospects for substantial growth of employment were thought to be generally poor, and neither Canterbury nor Ashford seemed suitable as bases for major concentrations of growth, although in the light of countryside and transport considerations this area seemed to offer opportunities for expansion, which might be taken up in the long term, perhaps following development of a major centre in the Maidstone/Medway area.

**Eastbourne/Hastings—Planning Area 21** (Planning district 39).

Although this seemed to be an area of opportunity in terms of the transport, countryside and economic objectives after 1981, development much above the scale required by normal growth of population and employment would be inappropriate, apart from that needed for a town development scheme at Hastings, prior to completion of major development in the Crawley area.

**Bognor/Shoreham/Brighton—Planning Area 22** (Planning districts 37, 38).

The capacity for further population growth in this area after 1981 would be limited, and provision for relief of continuing pressures of all kinds would need to be made northwards (in the Burgess Hill area) or westwards (in South Hampshire).

**Chichester/West Sussex—Planning Area 23** (Planning districts 35, 36).

On countryside grounds (conservation of open country, historic settlements and the coastline) this area was considered suitable for limited growth only.

**South Hampshire—Planning Area 24** (Planning district 47).

The arguments advanced in favour of large-scale growth in this area in devising the 1991B strategy (see Chapter 8, para. 8.30)—the size of the population and employment base, the proven attraction for industrial and office development—remained valid. Phasing problems were foreseen (a new trunk drainage system is required, together with substantial local road improvements) and pressures on recreational resources would be strong, but these were not considered sufficient to warrant a reduced rate of growth, in view of the lack of severe conflicts and the opportunity to build up a major growth centre distant from and independent of London.

**Bournemouth/Poole—Planning Area 26** (Planning district 48).

The area's potential for growth was recognised, but the team concluded that development here should be related to expansion in South Hampshire.

**Andover/East Hants/Winchester—Planning Area 27** (Planning districts 44, 45, 46).

On countryside grounds (conservation of the Hampshire Downs, opportunities for agriculture) this area was considered suitable for limited growth only.

**Newbury—Planning Area 28** (Planning district 56).

Some growth related to expansion in the Reading area and utilising Newbury's favourable position in the transport network, was considered feasible.

This is an area of substantial population and employment growth. Continued growth related to Oxford would be appropriate, although there is need for detailed study to select the most satisfactory location and form for further development to avoid the exertion of undue pressures on Oxford's city centre.

Milton Keynes/Northampton/Wellingborough—Planning Area 30 (Planning districts 66 and 67 and districts outside the region).

Expansion beyond the current programme for the 1980s, as envisaged in the 1991A strategy, was opposed on countryside grounds, because of the probable need to build on good agricultural and mineral bearing land and because of the impact of heavy population growth in neighbouring areas which are important for agriculture and short of recreational resources. Some doubts were also expressed about the feasibility of a build up of employment at a very much higher rate than present commitments require. However, it was thought that the area's locational advantages, the expansion planned for the 1970s and the possibility of creating a major growth centre by relating Milton Keynes with Northampton and Wellingborough would justify a high and rapid rate of growth in the 1980s and beyond.

Bedford—Planning Area 31 (Planning districts 68 and 69).

Large-scale growth would conflict with countryside objectives (mineral extraction; opportunities to increase agricultural productivity; conservation of historic towns, eg Ampthill and Bedford itself) although this would be possible in view of expected spare capacity on radial transport routes and the area's potential for employment growth. The team concluded that development in this area should be small in scale in view of expansion in the Milton Keynes area and in planning area 14 adjoining.

Saffron Walden/Braintree/Malden/Colchester—Planning Areas 32 and 33 (Planning districts 74, 75, 76).

Although sizeable growth was envisaged in this area in both the 1991A and 1991B strategies, countryside considerations suggested growth should be limited and the relative isolation of the area indicated that major expansion would not be favoured on transport grounds, although if the M12 were built the position would be changed. In general evaluation pointed to the restriction of development to that required for normal growth.

9.20 Areas not listed above were excluded from the evaluation process because very restricted rates of growth were envisaged in them for both the 1991A and 1991B strategies (many of the areas incorporate parts of the Metropolitan Green Belt) and it was decided that no changes should be made in them for the preferred strategy.

### Stage 3

9.21 The third and final stage of the evaluation process included further consideration of the areas of opportunity and conflict which had been reached in the previous stages. In the event this stage proved of lesser importance than had been anticipated since provisional population allocations made during Stage 2, when severe conflicts were generally avoided, had fallen short by only 150,000 of the design population figures for 1991. First however the team took account of the balance of advantages and disadvantages of the emerging strategy in terms of the various objectives. Regard was also paid to the possible consequential effects, if the emerging strategy were adopted, in both the short (ie pre-1981) and the long term (ie to the year 2001). The need for large growth centres (social and economic considerations) appeared to be satisfactorily met if large-scale growth went ahead in the Crawley area, South Hampshire, the Reading/Wokingham/Aldershot/Basingstoke area, Milton Keynes and South Essex, each of which should offer a wide range of job opportunities and community services. From the transport point of view, growth at these points was acceptable but concern was



expressed over the environmental and budgetary problems of providing for increased numbers of journey to work trips across the Greater London boundary, particularly after 1991, if it proved impracticable in the event to achieve an appropriate balance between population and jobs outside Greater London. These problems would, it was suggested, probably be most acute in the eastern part of the Reading/Wokingham/Aldershot/Basingstoke area and South Essex. In employment terms the emerging strategy seemed to offer a number of advantages. Not only would opportunities be provided for employment mobility over a range of distances from Greater London and in most sectors, but growth would be, to a large extent, concentrated on existing major centres which were considered to have good prospects for further growth. Also potential employment mobility over short distances would be provided for. Only in terms of the countryside objectives were major reservations noted, although some of the least satisfactory features of the 1991A and 1991B strategies had been eliminated.

9.22 Second, the team re-assessed the position in the main areas of opportunity and conflict. It seemed probable that population growth up to 1981 in the Crawley area might be substantially greater than had been previously anticipated if a second run-way were built at Gatwick. Some further growth in the decade 1981–91 was therefore allowed for, although it was recognised that the capacity of the area (about ½ million population) might be approached before the end of the century and that growth would therefore need to be checked after a period of rapid increase. Of the various towns in the Reading/Wokingham/Aldershot/Basingstoke area, Basingstoke was seen to have considerable potential for further expansion (town centre capacity, transport and employment opportunities) and, having taken account of all the circumstances, the team concluded that additional growth in the western part of the area would be acceptable. The advantages of relating the planned growth of Milton Keynes to expansion of Northampton and Wellingborough, just across the regional border, were considered and in the light of the opportunities this presented, the team concluded that, despite unresolved conflicts over the countryside objectives, further growth as envisaged in the 1991A strategy would be appropriate in this general area. Consideration of the post-1991 land use/transport problems in South Essex suggested that, in this area, continued growth at the rate envisaged in the 1980s would pose very difficult problems and that therefore a reduced rate of growth would be appropriate in the 1990s.

9.23 In addition to reconsidering the main areas of opportunity and conflict, and concluding that only a limited number of changes needed to be made to the broad allocations agreed in stage 2, the team also reconsidered a number of possible smaller growth points, taking account of their long term possibilities, and concluded that some expansion might be feasible at some of them (Aylesbury, Ashford, Bournemouth/Poole) but in each case this would need to be related to the development of the major centres in the same sectors out from London.

## Issues and conclusions

9.24 The main purpose of the evaluation process was, as previously stated (see paragraph 9.4), to assist in the identification of major issues and in deciding upon final objectives and measures, and a physical strategy related to these. Because the method used was primarily concerned with a comparison between the 1991A and 1991B strategies, it was not expected that definitive answers would emerge, but that the various findings would provide a sound basis for the team's recommendations.

9.25 Clearly the main issue, and the background to all the team's work, is the need for a strategy to cope within, and possibly just outside, the region with a population increase of up to 4.5 million by the end of the century, together with any outflow of population from Greater London (see Chapter 2). The total costs of providing for growth on this scale will inevitably be very large in a region where social problems, although localised, are already severe; where pressures on the transport system are considerable; and where there is a shortage of recreational resources, at least in the areas of greatest demand (ie near London). The need, in the national and regional interest, to ensure that the greatest



possible benefit is derived from existing facilities and that the most efficient use is made of the investment resources available suggests that it is desirable to relate new development, so far as possible, to existing and planned cities and towns.

9.26 All the indications are that the South East will retain its economic buoyancy but that the pressures for employment growth will not necessarily be evenly distributed throughout the region. The demand for labour in Greater London is likely to continue at a high level but it also seems likely that Greater London will continue to lose population, due to the combined effects of a falling birthrate and a continued high rate of voluntary migration. To avoid the potential environmental, resource cost and other problems which would be posed by increasing journey to work flows across the Greater London boundary it is clearly desirable to match population and employment growth so far as this is practicable and consistent with expansion of the specialised role of Central London. A further advantage of decentralising employment not related to this specialised role, especially if provision can also be made for the movement of workers with the employment which moves, is that it would reduce pressures of all kinds in Inner London. This would facilitate the improvement of living conditions and of the environment generally for those who need to remain there.

9.27 A number of factors combine to underline the advantages of planning for growth in large concentrations. Such concentrations offer large labour markets, job variety, possibilities of occupational mobility, scope for social and educational policies aimed at improving life chances for the less privileged sections of society and a variety in life styles and social and cultural provision generally for a wide cross-section of the population. The costs (as well as the benefits) of concentrating a high proportion of population growth in a limited number of major centres cannot be quantified at the present time and will in any case depend largely upon local and regional circumstances. The team has however concluded that, in the particular circumstances of the South East, provision for such centres should be a principal feature of the recommended strategy, although the difficulty in ensuring an adequate movement of employment to such centres at some distance from London was recognised. This suggested that provision should be made for a number of centres within the metropolitan region both to promote the movement out of London of firms which might not be prepared to move long distances and to reduce journey to work flows on roads which are likely to be overloaded around the Greater London boundary. It follows that particular attention will need to be paid to the relationship of homes and jobs in the London metropolitan region and that, in restructuring the area, every effort should be made to ensure that existing imbalances of population and employment are reduced.

9.28 The extent to which benefits may be reaped from development or costs incurred varies from one part of the region to another and one aim of the evaluation process was to discover which parts of any strategy were likely to offer particular benefits or to run the risk of excessive costs.

- (a) In North Kent and South Essex there are likely to be problems in providing a good road network. These will be accentuated, and the railways (especially South Essex) will operate under severe pressure, if the outflow of population from London is not matched by an outflow of employment. On the other hand these areas, both separately and jointly if linked by a new Thames crossing, offer scope for achieving social and economic objectives. Difficulties occur, however, because these are not areas of high labour demand, except for industrial employment in the Maidstone/Medway area; their links are predominantly with London rather than with other parts of the country; and both are subject to particular problems, physical capacity (South Essex) and countryside constraints (North Kent). Evaluation suggested that these difficulties might to some extent be overcome by concentration of growth in the Maidstone/Medway area of Kent, which has potential for developing relatively independently of London, and by sectoral development in South Essex, which would offer scope for development at various distances from London to achieve both social and economic benefits. These benefits would however need to be seen against a background of rising transport and environmental costs.
- (b) Development in part of the Reading/Wokingham/Aldershot/Basingstoke area would also

raise transport problems, because of the risk of increased commuting, but while the costs of this would be heavy the risks would be less than on the eastern side of London since the existing employment base has more growth potential and the area is more attractive to incoming firms.

- (c) Both the Crawley area and South Hampshire offer very considerable opportunities for growth without any significant problems of regional importance although local environment, drainage and sewerage and urban form difficulties may create problems of timing, which are likely to be the greatest in South Hampshire due to the scale of current growth.
- (d) In the north-west sector there is scope for more railway commuting but also a need for employment movement from the inner part of the sector to Milton Keynes and Northampton. Sub-regional form may be a problem but a phased build-up towards the population levels envisaged should raise no difficulties.
- (e) Development in other areas should not require equal priority since the scale and pace of their development will be related to developments in the major growth areas and problems of investment and phasing are likely to be of sub-regional rather than regional significance. There are however some areas where priority for residential development to meet present labour shortages will be appropriate and others where priority for employment will be appropriate to overcome particular local difficulties.

9.29 In general, therefore, evaluation points to priority for South Essex where the costs of failure would be high (and the risk not inconsiderable); for Milton Keynes/Northampton; for South Hampshire; and for the Crawley area.

9.30 Finally, evaluation confirmed the increasing pressures on the region's countryside. Opportunities for deriving the maximum benefit from the countryside are greatest where urban intrusion is least, and the team therefore concluded that the more remote existing large areas of open country should, wherever possible, be preserved. At the same time, the growing recreational needs of the urban population require the retention of open space and multiple use of the countryside within easy reach of major residential areas.

## CHAPTER 10

### RECOMMENDED STRATEGY

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10.1 The studies and plans which have been made over the years in the South East in response to changing circumstances and problems were outlined in the introduction to this Report. The studies undertaken by the joint team show how these problems and possible solutions of them continue to change and indicate the main needs to be provided for in a strategic framework for decisions on local development and on public investment and policies to the end of the century.

10.2 It has not been possible to describe in detail in the Report all the many problems revealed in the team's studies (they will be described at greater length in SEJPT Studies Volumes I-IV), but the main issues which face the region and with which the regional strategy must deal may be summarized as:

- i. the continuing increase in population, arising not from an excess of immigrants over emigrants but from natural increase of the region's 17 million inhabitants, which, together with an increase in prosperity and an increase in leisure time, is likely to lead to increasing demands for development and for facilities of all kinds;
- ii. the expected growth in demand for labour in some parts of the region, together with a slow increase in the supply of labour during the 1970s;
- iii. the difficulty in securing an adequate movement of new employment opportunities to create employment bases for new and enlarged settlements within the South East in addition to meeting the needs of Development, Intermediate and other priority areas in the rest of the country;
- iv. the conflicts in the region's countryside between the need to make appropriate provision for recreation and for facilities primarily related to urban development (including communications) and the need to safeguard the region's natural and historic heritage, mineral reserves and agriculture; and
- v. the need to provide for the satisfactory evolution of the London metropolitan region, covering that part of the South East in which linkages with Greater London predominate, and the solution of those urgent social and housing problems of Inner London which have regional implications.

10.3 This brief summary of the main regional issues is not intended to be exclusive. It is recognised that there are many other problems—for instance the danger of river flooding—which may be of considerable but primarily of sub-regional or local consequence. The future of the region as a whole depends, however, in large measure on the way in which the five major issues are tackled.

10.4 The studies undertaken by the team suggested a series of provisional objectives for the regional strategy which were set out in the foregoing chapters (2–6). The testing of hypothetical strategies against these provisional objectives (see Chapter 9) led to the formulation of a final series of objectives. These are:

- i. to derive the greatest possible benefit from existing and planned facilities and from the region's natural resources, and to ensure that the most efficient use is made of the investment resources available;
- ii. to combine sufficient flexibility to allow for different levels of population and employment growth and for evolution to meet changing circumstances, with a sufficient degree of firmness to be an adequate guide for the preparation of structure plans, for investment decisions by central and local government and for the attraction to private capital and enterprise;
- iii. to match population and employment growth, so far as this is practicable and consistent with expansion of the specialised role of Central London, taking advantage of opportunities to link the movement of workers with the further dispersal of employment opportunities;
- iv. to promote the functional structuring of the South East into city regions relatively independent of London, and thus allow for the development of efficient labour and employment markets for both employers and workers, without posing journey-to-work and congestion problems, and for the development of centres offering a wide range of community services;
- v. to provide, in the location, extent and phasing of urban development, for a wide variety of housing requirements and of job opportunities and for improved environmental standards in both new and existing urban areas, especially Inner London;
- vi. to make the best use of the countryside, by protecting from urban intrusion extensive areas of open country; areas which offer opportunities for open air recreation, for increases in agricultural productivity and for mineral extraction; areas of natural and historic heritage;

and areas which separate and prevent the coalescence of urban settlements, thus helping to give them an identity and distinctive setting; and

- vii. to secure the greatest possible ease of movement within the region and produce the greatest possible net benefits from the transportation system for transport users, consistent with the maintenance of good environment.

These objectives are the essential basis of the recommended regional strategy and whilst they may be, in certain cases, translated into proposals which can be shown on maps, they cannot all be illustrated in this way.

## The Strategy

### 10.5 The main features of the recommended regional strategy are:

- i. The development of a limited number of major growth areas at varying distances from London, using existing or planned urban settlements as bases for growth. Those closest to London would contribute to the planned development of the London metropolitan region and provide for workers and jobs unlikely to move over long distances: those furthest from London would develop into relatively self-contained city regions and utilize, as appropriate, employment which may be generated locally or which, although able to move some distance, is tied to the South East.
- ii. Redevelopment and rehabilitation in London. This would permit an increasing proportion of London's residents, especially the less privileged who live in Inner London, to enjoy higher standards of housing, environment and community facilities generally; and might be expected to provide the conditions for the continued development of Central London's national and international role in finance, commerce, administration, tourism and culture.
- iii. The expansion of a number of medium-sized employment centres which have potential for growth, together with relatively small scale development in other parts of the region. This would enable a wide cross-section of the population to have a varied choice of housing and environment.
- iv. In the countryside, the preservation of extensive areas of open country; the designation of a number of broad areas of regional significance for the conservation of fine landscapes and of pleasant country towns and villages and for the further promotion of agricultural productivity; and, as an important instrument to define the regional structure, the retention of the Metropolitan Green Belt (the boundaries of which may be examined in detail by local planning authorities in preparing structure plans).
- v. A regional road and rail network intended to provide for traffic between the more important centres of population and activity in the South East and between the South East and the rest of the country.

10.6 The recommended strategy is designed to accommodate different levels of population since no one can be sure what population levels will, in the event, need to be catered for. For design purposes the team adopted a figure of 4.5 million for population growth in the South East from 1966 to the end of the century (see Chapter 2), a figure which represents a share of the expected national population growth roughly equivalent to the region's share of the national population in 1966, and recognised that to provide for growth on this scale would make it more difficult, or more costly, to achieve certain objectives—for example the countryside objective (para. 10.4 (vi) above)—than if population growth were at a lower level. Whether in the event and within the time-span considered in the study, the region is required to accommodate either higher or lower levels of growth than have been assumed depends upon the actual amount of national population growth and also upon the extent to which national policies to achieve a better balance of economic growth between the regions

(see Chapter 2) are achieved. The team considers, however, that the recommended strategy should be able to cope satisfactorily with either eventuality.

## Major and Medium Growth Centres

10.7 The population of Greater London has steadily declined, as residential densities near the centre have been reduced and the size of households has diminished, but the population of the remainder of the London metropolitan region has steadily increased, and by much larger numbers. The metropolitan region is not easily defined. It includes those parts of the South East which form the main labour catchment area of Greater London. The Outer Metropolitan Area (OMA), which has been used throughout this study as one of the principal divisions of the region, was defined on the basis of the journey to work pattern of the 1950s, a pattern which has however since changed. It also includes the ring of post-war new towns and such large towns as Reading, Southend, Guildford and the Medway towns whose economies are to a considerable extent linked to London. In addition it includes many of those parts of the South East where Londoners enjoy open country. Thus it is an area in which linkages with Greater London predominate. Inevitably it has no sharply defined boundaries, and its extent changes over time.

10.8 The problems of the metropolitan region are many and some of them have been described in earlier chapters, notably the social and housing problems of Inner London (Chapter 3) and the problems of congestion and overloaded transport routes at the boundaries of Greater London (Chapter 6). The first of the hypothetical strategies which the team considered envisaged a relatively low level of population growth in the OMA and as much growth as seemed practicable in existing city regions and proposed growth areas on the fringes of the South East and beyond. In the second hypothetical strategy it was assumed that the metropolitan region's population would be to some extent redistributed, with population and employment growth concentrated in the south-western, north-eastern and eastern parts of the OMA. It was recognised that success in achieving either strategy would depend primarily on success in stimulating employment mobility over appropriate distances and in appropriate directions.

10.9 The recommended strategy would also require, in addition to indigenous growth of employment in industries and services, a considerable amount of employment movement to those parts of the region selected for substantial population growth. Estimates of the amount of mobile employment needed cannot be precise (see Chapter 9) and are in any case dependent on assumptions about the effects of Government or local policies, and about the organisation and structure of industry itself, which may well change. Tentative estimates suggest however that the requirement for mobile manufacturing and office jobs might be of the order of 15–20,000 a year in each category. The strategy provides for a number of growth areas in the OMA which, by offering opportunities for firms to move while retaining a high proportion of their work force, should help to keep up the overall volume of employment mobility in the region. Further, the strategy should to some extent stimulate employment mobility by offering a wide choice of possible locations for resettlement of employment in most sectors of the South East and by relating the growth areas to each other within sectors to allow for movement outwards by firms in due course.

10.10 At the same time, by utilizing existing and planned settlements as the basis for expansion, the strategy aims to capitalise on potential indigenous growth, and by this means to reduce so far as possible dependence on mobile manufacturing and office employment.

10.11 For the purpose of presenting the strategy, two categories of growth area were defined on the basis of population growth<sup>1</sup> envisaged in the period 1981–91. The major growth areas recommended

<sup>1</sup> The population figures given below and in Appendix D are indicative only of the scale of growth to be accommodated in certain areas; they are not targets. Population growth envisaged in the period 1966–91 and in the period 1966–2001 is shown, by planning areas, in Figures 31 and 32.



(and the end of the century population figures envisaged for each) are:

South Hampshire (approaching 1.4 million).

Milton Keynes/Northampton/Wellingborough (about 0.8 million);

Reading/Wokingham/Aldershot/Basingstoke (between 1.0 and 1.2 million);

South Essex (about 1.0 million); and

the Crawley area (about 0.5 million).

The latter three growth areas lie within the metropolitan region itself and have been selected in sectors of the region where the potential or need for growth, whether of population or employment, is considered greatest. The medium growth areas recommended are—the Maidstone/Medway area; Ashford; Eastbourne/Hastings; Bournemouth/Poole; Aylesbury; Bishop's Stortford/Harlow; and Chelmsford.

10.12 The strategy provides not only for large-scale growth areas both within and outside the London metropolitan region, but also for flexibility between the two. If longer distance movement of employment or growth of both employment and population were more than expected, the strategy would allow for the acceleration of growth in the two outer city regions of South Hampshire and Milton Keynes/Northampton/Wellingborough, perhaps even before 1981. If, on the other hand, it were less, the three major growth areas within the metropolitan region are likely between them to have the capacity to absorb higher levels of population than has been suggested above, although this will be subject to detailed assessment in the preparation of structure plans.

10.13 Further flexibility is provided for by the medium growth areas both within and outside the metropolitan region. Some of them might be used either to relieve unacceptable pressures in the major growth areas or to compensate for failures to achieve the desired rates of growth within these areas. For example, should the rates of growth proposed for South Hampshire, prove impracticably high—perhaps because of infrastructure problems—then it should be possible to divert some growth to the Bournemouth/Poole area, which already has a sizeable employment base. On the other hand, if it should prove difficult to achieve the rates of growth suggested for South Essex—for example because of difficulties over employment growth and problems of achieving a satisfactory urban form—then development might be started in the Stort Valley to the north.

10.14 The medium growth areas which are proposed within the metropolitan region have further functions, besides their role as 'safety valves' for the major growth areas. They would assist in the restructuring of the metropolitan region, and provide a choice of environment for both employers and workers. The problems of the metropolitan region have been outlined already (see para. 10.7). The principal need is to reduce the pressures on London's boundaries both by building up centres of population and employment complementary to London (which the Reading/Wokingham/Aldershot/Basingstoke, South Essex and Crawley growth areas would be) and by developing functional relationships between these centres.

10.15 The region's road network can play a vital role in this respect. The network is already highly developed and considerable improvements are planned over the next decade. As further urban development takes place it will be possible and necessary to make additional improvements to the network and the team therefore recommends certain new links, including two in the form of major new road routes which would also help to relieve over-loading on routes approaching London from the north-west. The northern route would link Luton, Stevenage, Harlow and South Essex. To the north-west it would connect with Milton Keynes, and beyond with the west Midlands; to the south-east it would connect, via a new crossing of the Thames at Tilbury, with North Kent and with the Channel ports or Channel Tunnel if this is built. The western (much shorter) route would link Milton Keynes directly with the proposed orbital route north-west of London, and would thus provide a motorway connection with the Reading/Wokingham/Aldershot/Basingstoke area and South Hampshire. By means of



these and many other improvements to the network, most major and medium growth areas in the region would be linked by roads of good standard, both with each other and with the rest of the country. The strategic road framework illustrated in Figure 33 is not however intended as a highways plan. It does not distinguish between road categories; only selected routes are shown; and no firm distinction is drawn between roads on new alignments and improvements to existing routes. Such matters as the category of the road for a particular route; the capacities required at a given date; and the need for new construction or improvement of an existing route, all require further examination. The strategic railway framework is illustrated in Figure 34.

10.16 If it is important that there should be flexibility between the outer parts of the South East and the metropolitan region, and that the latter should be restructured in whole as well as in part, it is no less important that there should be flexibility within the metropolitan region. The usefulness of the medium growth areas in this respect has already been described.

10.17 Flexibility within the metropolitan region largely depends on the size of Greater London's population. The team regards it as important that Greater London should accommodate the maximum number of residents consistent with the achievement of improved housing conditions and good environmental standards at reasonable cost, especially in Inner London (see objective (v)), particularly in view of the problems which are likely to be posed if the outward movement of employment fails to keep pace with the outflow of population. It is however very difficult to say what London's population might be beyond 1981. This would require a detailed study of environmental capacities and projections of household sizes and occupancy rates, which are complicated by the large gross flows of population into and out of Greater London. There may, for example, be possibilities for massive new housing developments on land at present not available or allocated for this purpose. The movement of dock activities downstream, the reclamation of low-lying land and the use of land not now required by statutory undertakings may enable more Londoners to be housed in better circumstances close to the many jobs which are essential to Inner London's functions; which cannot be moved; or which are needed to give a reasonable range of occupational opportunities for the less privileged as well as for the upper occupational groups. The team concluded that, nevertheless, a further fall of Greater London's population below the level of 7.3 million which is anticipated at 1981, perhaps to 7 million, may have to be faced.

10.18 If Greater London's population continues to decline, it will be important to ensure that commuting does not further increase and therefore that employment opportunities are reduced as far as possible to match the decline of population. This is one reason why the team has recommended growth in centres which seem most likely to attract employment without the assistance of further measures to stimulate mobility. If, on the other hand, the population of London can be stabilised at the higher figure, the pressures on the remainder of the metropolitan region may be reduced and the population totals envisaged by the team for the OMA growth areas may be appropriately cut back.

## The Countryside

10.19 The countryside is not simply a reserve of land to meet the requirements of urban development. Its other functions (see Chapter 4) are no less important. It is a source of essential materials—food, minerals and water. It accommodates much of the region's natural and historic heritage. It offers scope for satisfying recreational needs which are constantly expanding and which cannot be met within urban areas. And, not least important, it is an essential element in the structure of the region, separating and giving a distinctive setting to urban settlements. The Metropolitan Green Belt is seen as an important element in this context. These functions are best and most easily performed when broad areas of countryside are protected from urban development, and the team sees this as a method of achieving objective (vi) and consistent with its other objectives.

10.20 The strategy therefore provides for the retention of very extensive areas of open countryside

and suggests the adoption of overall countryside policies including, where appropriate, positive measures not only to conserve but also to improve the appearance of the countryside and to utilize its resources to the full. In particular the strategy indicates broad areas of regional significance where priority might be given (a) to increasing agricultural productivity and (b) to the conservation of fine landscape and of natural and historic heritage. The future development of the region's towns and cities to accommodate population growth up to the end of the century at satisfactory environmental standards may however require 600–700 of the region's 10,500 square miles. Also additional facilities will be required in the form of roads, reservoirs and power lines, which will take up more land and which will intrude further into the countryside. Considerable loss of open countryside is thus inescapable and the strategy necessarily provides for this too.

### The 1981 Situation

10.21 The recommended strategy is primarily concerned with the emerging regional situation after 1981. As already mentioned (see chapter 7) the pattern of regional development in the 1970's is determined to a large extent by current programmes for New Towns, large town development schemes, major roads and other projects. These inevitably take a long time to plan and execute.

10.22 The major growth areas postulated in the strategy will equally need a long time to mature. Much detailed planning of the location of new development, infrastructure, drainage and other issues will be needed during the 1970's. This is bound to influence progressively the pattern of development in the region if the strategy is to be brought into operation smoothly and progressively in the 1980's. Indeed in some areas plans may need to be brought into operation somewhat earlier, e.g. in the Crawley area if a major expansion of the facilities at Gatwick Airport were to be approved leading to a major increase in the demand for labour in the area.

10.23 Furthermore if the strategy is endorsed some of the recommendations, e.g. for conservation in the countryside, and for dealing with social problems, could be brought into operation without undue delay. The team was not however in a position to suggest detailed amendments to current development plans and other commitments. These will have to be considered by the local planning authorities and by Government Departments in the light of the recommended strategy.

### Phasing

10.24 Since two important features of the recommended strategy are flexibility on the one hand and the concentration of growth in large city regions on the other, a dilemma is posed which can only be overcome by phasing. If all the proposals put forward by the team began to be implemented in full at the same time and population growth proved less rapid than currently anticipated, the region might well have started more major developments than could reach maturity in a reasonable time. This would be costly and unsatisfactory from many points of view. At the outset there would be a wide range of choice for employers deciding on locations for new factories or offices and a wide range of choice for people deciding where to live. In the longer term both employers and house buyers would be dissatisfied if the assumptions which they took into account when making their decisions were not fulfilled. Development should therefore be initiated in an orderly manner consistent with the least possible restriction on freedom of choice for those likely to move to new locations.

10.25 It is important therefore to indicate areas for priority development, having regard to the factors set out above; present commitments and the needs of the areas concerned; the desirability of early action to contain growth in certain areas close to London; ease or difficulties of administration; return of investment and the scale of the infrastructure required; and avoidance of conflict in achieving regional objectives. In the light of these considerations the team recommends that the following areas—South Hampshire, South Essex, Milton Keynes/Northampton/Wellingborough and the Crawley

area—should have priority for general development for both population and employment growth although the particular requirements of each will vary. Harlow should also be considered as a priority area for general development, although this will be on a lesser scale than in the major growth areas. In addition steps should be taken to correct imbalances between population and employment growth in certain other areas—for example by providing for residential development at Stevenage, Luton and in parts of the Reading/Wokingham/Aldershot/Basingstoke area and by providing for employment growth not only in South Essex but also in the Maidstone/Medway area. In general these priorities should, as appropriate, be taken into account before as well as after 1981 (see paras. 10.22 & 10.23): in the longer term, as the scale of growth which is feasible and desirable becomes more clear, some narrowing of priorities, and perhaps substitution of other areas for those listed, may seem appropriate.

10.26 A second way in which implementation of the strategy might be phased is at the local level. Sub-regional structure plans should be designed in such a way that new “cells” of development might be undertaken or postponed without seriously affecting either existing development or other committed cells. This kind of phasing, too, is desirable, and whilst in theory it should be capable of general application, it is acknowledged that the degree of flexibility which can be achieved will depend to some extent on local considerations.

10.27 The structure of development in a particular area might, for example, be based on existing centres as well as on new centres and cells of development. Properly planned programming of development within such a structure could offer variety and choice without commitment to development on the scale ultimately envisaged. If the plan for the whole growth area required a new major centre, this would necessitate particularly careful timing and a start might be delayed until it became clear that a large part of the growth envisaged was likely to take place within a reasonable time.

10.28 The team recognises that its suggestions for phasing raise both local and general considerations in relation to structure plans which will require further examination.

## Implementation

10.29 Implementation of the regional strategy will depend on the investment plans of central and local government; on the Government's social and economic policies; and on a multiplicity of investment decisions by private individuals and organisations. So far as public investment is concerned, the increase in public expenditure required to implement the strategy is expected to be in line with the expected increase in national resources. Implementation of the strategy will also depend on structure plans prepared by the local planning authorities.

10.30 Structure plans will eventually cover the whole region. Where it is considered appropriate that plans should cover an area for which there is more than one local planning authority, it will be important for the authorities concerned to cooperate so that their structure plans provide for cohesive treatment of the area (as is already happening in some cases). Thirty-three such areas are listed in Appendix E, which also gives broad guide lines for local planning authorities in the preparation of plans for these areas.

10.31 As previously indicated (see Chapters 2 & 7) there will be a shortage of labour during the 1970's. However the demographic trends of the 1955–65 period are likely to produce a substantial increase in the population of working age in the late 1970's and the 1980's, which will occur when manufacturing and service industries have become accustomed to a slow rate of growth in labour supply. This will be followed a few years later by a new wave of household formation and therefore housing demand. There will thus be growth in demand for jobs, housing and recreational facilities throughout the 1980's and 1990's which could in consequence be the period of greatest opportunity for implementing the recommended strategy. Structure plans to deal with the opportunity should therefore be completed and approved in good time.

10.32 It will also be highly important for local planning authorities to be concerned in a positive way in the implementation of the strategy. In providing this driving force they may need to take responsibility for comprehensive development of particular districts, including perhaps the creation of new settlements. Following the reform of local government, the new local authorities should have the strength, in terms of staff, organisation and finance, to undertake such major projects.

10.33 Particular problems may however, require special agencies. The team's study suggests that the building industry will be able to produce the total volume of house building required for the expected population increase. However, in the major growth areas, development would be at a faster rate than in any New Town or town expansion scheme to date. In the case of some of these areas, construction of 4-8,000 houses a year in the 1980's, as envisaged in the strategy, would be in line with current output: in others it would be well above current output, and this might pose organisational and other problems. The need for special agencies to deal with specific problems and areas not only for house-building but for other major projects will be a matter requiring further consideration in the light of emerging circumstances.

10.34 In this connection the team believes that in future it will be difficult to draw a clear distinction between normal population growth (resulting in part from migration) and overspill, especially where growth is expected to take place on a large scale. Increasingly, choice of homes and jobs should widen for all sections of the community. Also, in view of the increasingly rapid outflow of London's population, less reliance can be placed than in the past on London's willingness to undertake overspill schemes.

10.35 Whether or not special agencies are appropriate to deal with particular problems and areas, there will remain the need for coordination and cooperation between authorities. There may, for example, be need for local authorities to collaborate in providing or augmenting a particular service throughout a part of the region. It will also be important that the allocation of investment resources, by central or local government, should be related to the priorities and problems of the various parts of the region rather than governed solely by the particular merits of individual projects.

10.36 One of the principal objectives of the strategy is to match population and employment growth. This will require the phased build-up of jobs in new growth areas which can be assisted by complementary policies for local development control and for controls on industrial and office development.

10.37 It has been assumed by the team that national distribution of industry policy (see Chapter 2) will continue to give priority to fostering employment growth in those parts of the country where new job opportunities are needed. Thus manufacturing and office development which can move from the South East to such areas should be encouraged to do so.

10.38 However, there are organisations which wish to expand and which can move but not beyond the region (as current implementation of i.d.c. policy suggests). It is important for the strategy that as much as possible of this employment should be encouraged to settle in the proposed growth areas. This is especially important for those areas which require employment growth, and firms which are tied to the South East and which wish to move to those areas should be allowed to do so. It is, however, recognised that many firms which are tied to the region are bound to prefer to try to expand in situ and that there are very great difficulties in operating controls, such as the i.d.c. and o.d.p. controls, with a view to steering industry to particular places within short distances of the sites on which the firms themselves wish to expand.

10.39 Outside the growth areas the general presumption would be that permission to establish entirely new sources of employment growth would not be available.

10.40 Care will be needed in phasing employment growth with population growth to avoid building

up a momentum in particular areas that may pose problems later on. Job opportunities in new and expanding firms may multiply rapidly over time. As the need to build up employment opportunities in a particular district declines, controls should become tighter and other districts might then be given priority. Since the i.d.c. and o.d.p. controls were not designed and are not suitable as tools for detailed control of the kind envisaged (although account is taken of local factors in operating them) the extensive phasing and other problems which seem likely to occur will need to be handled at least in part by local authorities who will need to use planning controls with great discrimination to ensure that employment and population growths are kept in step with each other and that other local planning needs, including redevelopment, are met.

10.41 Although further controls or incentives to ensure employment movement are not at present proposed, employment growth will need to be carefully monitored to see whether regional objectives are being met or jeopardized. In view of the nature and scale of the problem, the intensification of existing methods of control and perhaps new measures possibly of a fiscal nature, may have to be considered at some time in the future.

10.42 Continuous monitoring will therefore be required at two inter-related levels. At sub-regional level there will be need to ensure that appropriate local phasing occurs in the growth areas and that other objectives are met: at regional level there will be need to assess the growth of employment opportunities overall, the balance between growth areas and the need to give priority to new areas or to phase out old ones.

10.43 The strategy will undoubtedly require adjustment as a result of changing demographic, economic and social conditions; as particular decisions are taken which had a direct bearing on the strategy—on London's airports, membership of the European Economic Community and the Channel Tunnel; and as more information becomes available, notably from structure plans. There will also remain problems which have implications much wider than any one sub-region. All these matters too will require monitoring and further study.

10.44 In view of all these considerations there should be suitable machinery to

- (a) monitor progress on implementation of the regional strategy;
- (b) monitor long-term trends which will affect the regional strategy;
- (c) ensure that initiatives are taken at regional level on matters not fully dealt with in this report and which are of regional significance; and
- (d) suggest amendments to and development of the regional strategy.

## APPENDIX A

### SOME TERMS USED IN THIS REPORT

#### Accessibility

An index of geographical proximity and convenience of movement between different types of land use (taking account of the scale of the different land uses) in an area.

#### City Region

An urban complex together with the smaller settlements and countryside which have strong relationships with a centre of urban activity. A city region may have more than one major centre of urban activity.

#### Commuting

Journeys to work which cross the Central London boundary.

#### Development areas

Areas for which special Government assistance is available under the Industrial Development Act, 1966, to encourage the growth and proper distribution of industry.

#### Educational Priority Areas

Areas, particularly urban areas, where educational handicaps are reinforced by physical and social handicaps and which require and have received positive discrimination in the allocation of funds by the Government under the Local Government Grant (Social Need) Act 1969.

#### Establishment

A manufacturing establishment comprising the whole of the premises under the same ownership or management at a particular address.

#### Firm

One or more productive establishments operating under the same trading name.

#### Home Population

Population resident in an area (including armed forces stationed there) on a given date.



## Industrial Development Certificates (i.d.c.s)

Documents issued by the Ministry of Technology certifying that particular proposals for industrial development are in accordance with the proper distribution of industry. A certificate must accompany any application for planning permission for industrial development exceeding a certain area of floor space (currently 3,000 square ft in the South East).

## Employment Structure

The proportion of the total employed in an area who are employed in each of the 24 industrial orders defined in the Standard Industrial Classification, issued by the Central Statistical Office in 1958.

## Infrastructure

The permanent assets of a community, eg roads, schools, sewage works.

## Intermediate Areas

Areas which do not experience the same severity of problems on average or over so wide an area as are characteristic of Development Areas, but which give some cause for concern, for example because of a slow rate of economic growth. They qualify for certain types of Government assistance under the Local Employment Act 1970.

## Land Use/Transportation Study

A study of existing and future demands for movement within an area, using methods of analysis and prediction which relate to (a) the existing and future land use patterns and (b) the existing road and public transport networks and possible future improvements and modifications of these.

## Migration

Gross migration is the total movement of population into and out of an area. Net migration is the difference between the gross movements of population into and out of an area.

## Mobile Employment

Employment, whether sited in new or existing premises, which results from the transfer of operations from one location to another and from the opening of an additional establishment or branch. It includes any subsequent growth of employment in the new establishment.

## Monitoring

The process by which events as they occur are recorded and analysed.

## Natural Increase

The excess of births over deaths.

## Occupational Structure

The proportion of the total employed in an area who are employed in each occupational group as defined in 1966 Census Workplace Table, Vol. 11. eg managerial, clerical, etc.

## Office Development Permits (o.d.p.s)

Permits granted under the Control of Office and Industrial Development Act, 1965, at the discretion of the Minister of Housing and Local Government and which must accompany any application for planning permission for office floor space in excess of the exemption limit in areas defined in the Act or designated by the Minister.

## Planned Expansion Schemes

Urban development under the New Towns Act and the Town Development Act, designed to cater primarily for planned overspill of population and/or employment.

## Projection (population)

A calculation of population at some future date, according to selected assumptions. Projections may be static, ie based on the known age/sex distribution at a given point in time, or may incorporate assumptions on migrational changes over time. They are not forecasts, in as much as some of the assumptions on which they are based may be known to be arbitrary.

## Restructuring

The process of reorganising land uses to improve the environment and functioning of an area.

## Service Industry

This includes, broadly speaking, all personal services, professional and commercial activities, national and local government, public utilities and transport.

## Social Mobility

The movement of individuals and social groups to either higher or lower positions within a social hierarchy.

## Social Polarisation

Accentuation of the extremes in a social hierarchy.

## Transportation Model (Used for Testing)

A mathematical simulation of transport movements in an area.

## Urban Programme

A Government programme provided under the Local Government Grants (Social Need) Act 1969 which supplements local authority efforts to improve the infrastructure in certain decaying urban areas.

## APPENDIX B

### DEFINITION OF AREAS

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#### Definition of Areas

The South East Economic Planning Region covers the counties of Bedfordshire, Berkshire, Buckinghamshire, Essex, Hampshire, Hertfordshire, Kent, Greater London, Oxfordshire, Surrey, East Sussex, West Sussex, and the Isle of Wight.

The South East Standard Region is used for statistical purposes and covers the same area as the South East Economic Planning Region, plus Poole M.B.

There are three major divisions of the region Greater London (see below); the Outer Metropolitan Area (an area outside Greater London defined by the Registrar General for statistical purposes); and the Outer South East (the remainder of the region). Both the Outer Metropolitan Area and the Outer South East have been further divided into six sub-divisions.

The Metropolitan Region is the area within which links with London predominate. It extends to a radius of about 40 miles from Central London, but has no clearly defined boundaries. It is a functional rather than a geographical area.

Greater London is the area for which the Greater London Council is planning authority. Greater London is also simply referred to as London.

Central London is an area, defined in the 1961 Census, roughly bounded by the mainline railway stations.

Inner London is the former London County Council area.

Outer London consists of Greater London, less Inner London.

Planning districts were used by the team for the purpose of data collection. The region was divided into 66 such districts (numbered between 1 and 76). These were areas broadly homogeneous in character in land use terms and generally they conformed to local planning authority boundaries. Planning districts are shown in Figure 36.

Planning areas were used for the purpose of presenting the strategy, and the planning districts were aggregated to form 33 such areas. Planning areas are shown in Figure 37.

## APPENDIX C

### THE THIRD LONDON AIRPORT AND THE REGIONAL STRATEGY

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1. As indicated in Chapter 6, the task of recommending a site for a Third London Airport is a matter for the Commission under the chairmanship of Mr. Justice Roskill. It may, however, be useful to indicate how the regional strategy recommended in this Report might need to be adjusted to accommodate the airport and in particular the associated urbanisation.

2. The position is complicated by the fact that proposals for major airport development in the South East do not relate solely to the four possible T.L.A. sites short-listed by the Commission but may involve expansion at Gatwick and Luton (and also continued use of the B.A.A. airport at Stansted). This appendix, therefore, considers the impact on the recommended strategy of the choice of a T.L.A. site and the problems of further development at Gatwick and Luton. Many local issues and noise problems are deliberately avoided, although these would normally be thought of as planning matters. This is because the Commission is investigating them, in relation to the T.L.A. sites, in much greater depth than was appropriate in the course of a study of the entire region.

#### Thurleigh

3. The airport would be close to the proposed city region of Milton Keynes/Northampton/Wellingborough. Population growth of about 300,000 is envisaged for the city region in the strategy, and this would result in a total population of about 800,000 by the end of the century. The strategy is, however, flexible enough to allow for further population growth—sufficient perhaps not only to meet the requirements of the airport but also to meet the needs of some additional employment to provide a variety of occupational opportunities.

4. The problem posed by airport development at this site would be of a different kind. In the strategy an attempt has been made to utilize all the employment mobility that is likely to be generated in the South East. For this reason a number of growth areas have been proposed at varying distances from London, both on the fringes of the region and closer in. Past experience indicates that employment movement along a sector out from London is much more likely than movement in any other direction, and no difficulty is expected over securing an ample amount of employment mobility in the north-west sector since it has proved particularly attractive for industrial development since World War II. If therefore employment movement to the Milton Keynes/Northampton/Wellingborough area is positively encouraged during the 1970s, considerable growth momentum is likely to have been built up even before the T.L.A. development and associated urbanisation gets underway. Moreover it might prove difficult in the later period to divert potential employment growth from this area to other parts of the region. There is therefore danger, if the Thurleigh site is chosen, that employment growth in the north-west sector will be over-stimulated. In that case the choice in the 1980s would be either to allow continued large-scale growth in this sector, perhaps including additional urban development close to London, or to find ways to steer mobile employment away from the sector it would naturally tend to follow.

5. Thurleigh is within a countryside area that is of some importance agriculturally and also of landscape value. Conveniently placed open air recreational facilities may prove difficult to provide for a very large population.

#### Cublington

6. From the regional point of view Cublington and Thurleigh are in the same general area for development purposes and thus the same urbanisation proposals apply (see para. 3). Also here is the same possibility of over-stimulating employment growth (see para. 4). However, there are two additional problems. Choice of the Cublington site would involve reconsideration of existing plans for the development of Milton Keynes. It would also increase the demand for labour in those parts of the north-west sector, and particularly in the Luton/Stevenage area, which already suffer from labour shortages and where the recommended strategy suggests population growth mainly to overcome these. On the other hand, it would probably be necessary to close Luton airport, in which case more land for housing development would become available.

7. The airport site is within a countryside area but it is not within an area shown in the strategy as of regional significance either for agriculture or for amenity.

#### Nuthampstead

8. Both the airport site and the urbanisation required for the airport would be within a countryside area which is also considered regionally important for agriculture, for landscape value and for the conservation of settlements of architectural or historic importance. The urbanisation is also likely to be considerably in excess of that proposed in the recommended strategy, and would need to be located further to the north. Although the report envisages that growth in the Stort Valley/Harlow area might be of the order of 210,000 people in the period 1981/2001, a slow rate of growth is proposed up to 1991. A higher rate of growth after 1991 would, in fact, begin to change the character of the area completely and would only come into the reckoning in the following circumstances:—

- (a) if the capacity of the South Essex/Chelmsford corridor is eventually assessed as below 1.25 million (and the Stort Valley is consequently required to provide an outlet for the movement of employment over short distances from London);
- (b) if the population level in the metropolitan region outside London rises to the level assumed in the study, despite efforts to get wider dispersal; and
- (c) if other alternatives prove impracticable.

9. The Report makes it clear that difficulty is foreseen in generating sufficient "long distance" employment mobility within the region to achieve the desirable dispersal of population and employment growth. The T.L.A. represents a substantial amount of potential "long distance" employment mobility and its location relatively close to London, if the Nuthampstead site is chosen, would therefore, on this account, be disadvantageous in terms of the regional strategy. It might also have the effect of drawing away much needed employment from the South Essex growth sector.

10. The north-east sector of the region is already under heavy pressure to provide recreation for Londoners and further substantial development in the area would exacerbate the situation. Thus development on the scale likely to be generated by the airport would compromise a number of the objectives for the countryside recommended in the strategy.

#### Foulness

11. The population expansion envisages in the period 1981/2001 for the South Essex/Chelmsford corridor is about 325,000 giving an end of century population of something like 1.25 million. On the face of it this total population should be sufficiently large both for the airport and to achieve regional

objectives, but the position is somewhat more complex. Whilst growth in South Essex after 1981 requires a substantial amount of long distance movement of population and employment, it is also intended, in part, to provide for some short distance movement of people and jobs from London in so far as the social problems of the less privileged cannot be readily dealt with within Greater London's boundaries. This short distance movement is regarded as of considerable importance by the team and needs to be taken into account in planning for growth in South Essex. Part of the proposed post-1981 development is, therefore, especially related to achievement of social policies.

12. On the other hand, there may be difficulty in stimulating employment growth as required by the strategy in South Essex and the airport at Foulness could provide a much needed stimulus for such growth. Also employment opportunities at the airport may lead to a reduction in commuting from South Essex into London (although the vacated London jobs may still need to be filled by commuting from elsewhere) and hence less new urbanisation would be required than if another site were chosen. The availability of the labour force now employed at Southend airport, which would have to close, might also limit the need for additional urbanisation.

13. A dilemma however arises because the scale of urbanisation required to provide both for the airport and for short distance overspill of people and jobs from London might exceed the capacity of the South Essex corridor to accommodate such growth at acceptable environmental standards. Also to be considered are the environmental effects and costs of providing the additional road and rail facilities which may be required by the inter-urban traffic flows expected in the South Essex corridor towards the end of the century.

14. Although, therefore, employment growth in South Essex is desirable and needs to be stimulated, it will be necessary, if Foulness is chosen, to make a detailed assessment of the area's capacity and of the transport and related environmental problems likely to be posed by very large-scale growth; and also to examine the extent to which the T.L.A. and other possible alternatives might help in solving the social problems of the less privileged in Greater London.

15. From a recreational point of view growth on the scale envisaged in South Essex would put additional pressure on the area's limited countryside amenities although it has been accepted that this is less important than the achievement of other objectives, especially since a new Thames crossing would bring a wider range of recreational facilities within reach. An airport at Foulness might however, reduce the recreational potential of the coastline in both Essex and North Kent and this is of particular importance since the coastline is under pressure in almost every part of the South East.

#### Associated Problems

16. Luton's airport is within an area recommended for limited growth but the additional urbanisation proposed is required to satisfy the growth prospects of existing industries and to provide for only a limited amount of new employment. Substantial growth of the airport would therefore call for a degree of urbanisation not envisaged in the regional strategy. This might be difficult to accommodate without causing local transportation problems and without intruding on to land which the strategy envisaged would remain part of the countryside. Nevertheless the further development of Luton airport (if this needs to be provided for should the Foulness site be chosen for the T.L.A.) would benefit South Essex, by reducing the scale of development required in connection with the T.L.A. This would have to be considered against the disadvantages of further development in the Luton area.

17. Gatwick is within one of the major growth areas recommended in the strategy and the scale of development envisaged is thought to be sufficient to provide labour not only for the growth of existing industries but also for any necessary growth associated with the airport. The area is attractive for industry and the urbanisation proposed, although adequate to service airport expansion, is not conditional upon it. Early expansion of the airport would however require adjustment of the timescale envisaged in the strategy for development in the Crawley area.

18. Continued and perhaps more intensive use of Stansted's existing facilities would pose problems over the form and size of further development in the Stort Valley/Harlow area (see before, para. 8).



# INDICATIVE POPULATIONS BY PLANNING AREAS USED IN DRAWING UP THE RECOMMENDED STRATEGY

TABLE 1: POPULATION CHANGE

NOTE: These figures are neither projections nor targets. They are indicative of the scale of growth envisaged in the strategy. The figures for 1981, 1991 and 2001 are rounded off and do not add up to the totals given at the foot of the columns.

(Thousands)

Area No.	Planning Districts (used for analytical purposes)	General Areas (not necessarily limited to the towns named)	1966	1981	1991	2001
1.	GREATER LONDON	GREATER LONDON	7,825	7,340	7,000	7,000
2.	20, 21, 22, 24, 25 (PART) <sup>1</sup>	MEDWAY/NORTH WEST KENT	653	800	890	950
3.	23	SOUTH WEST KENT	169	190	210	230
4.	34	UCKFIELD	48	60	70	70
5.	30, 31, 32	EAST SURREY	322	360	360	360
6.	33	CRAWLEY/BURGESS HILL	227	280	400	470
7.	PART 40, 41 and PART 42 <sup>2</sup>	STAINES/GUILDFORD	571	680	720	740
8.	PART 40, PART 42, 43, 50, 53 <sup>2</sup>	READING/WOKINGHAM/ ALDERSHOT/BASINGSTOKE	498	720	950	1,200
9.	54	CHILTERN	72	90	90	90
10.	51, 52	SLOUGH/CHESHAM	483	560	590	610
11.	55 (LESS BLETCHLEY) <sup>3</sup>	AYLESBURY	80	100	140	160
12.	60 and 61	SOUTH WEST HERTS	449	560	590	610
13.	65	LUTON	240	300	340	370
14.	62	HITCHIN/HATFIELD	255	330	370	390
15.	63, 64 <sup>4</sup>	EAST HERTS	165	230	270	380
16.	70, 71	WEST ESSEX	188	230	270	290
17.	72	CHELMSFORD	116	150	200	220
18.	73	SOUTH ESSEX	588	740	910	1,010
19.	26 PLUS PART 25 <sup>1</sup>	NORTH EAST KENT	293	320	350	370
20.	27, 28, 29	SOUTH EAST KENT	213	240	280	330
21.	39	EASTBOURNE/HASTINGS	256	330	380	420
22.	37, 38	SUSSEX COAST	526	590	600	610
23.	35, 36	SOUTH WEST SUSSEX	138	160	180	190
24.	47	SOUTH HANTS	836	1,000	1,210	1,400
25.	49	ISLE OF WIGHT	100	110	110	120
26.	48 <sup>5</sup>	S.W. HANTS/POOLE	362	420	480	530
27.	44, 45, 46	HANTS. DOWNS	187	250	270	290
28.	56	NEWBURY	55	80	100	110
29.	57, 58, 59	OXFORD	429	550	600	670
30.	66, 67, (PLUS BLETCHLEY) <sup>3</sup>	MILTON KEYNES	81	180	360	490
31.	68, 69	NORTH BEDS	195	250	270	300
32.	74, 75	NORTH WEST/MID-ESSEX	146	190	210	220
33.	76	N.E. ESSEX	223	280	310	340
	Total, South East Region		16,989	18,686	20,086	21,586

1 The part of PD25 included in Maidstone/Medway planning area is the western part including Queenborough, Sheppey, Sittingbourne and Milton and the western part of Swale RD.  
North East Kent includes Faversham and the eastern half of Swale RD from PD25.

2 Farnham UD has been transferred from PD42 into Staines/Guildford area.  
Bagshot RD has been transferred from PD40 into Reading/Wokingham/Aldershot/Basingstoke area.

3 Bletchley UD is now included in Milton Keynes and not in PD55-Aylesbury. Also included in the Milton Keynes figures for 1991 are the external zones 841-844 Northampton and Wellingborough-where some of the South East's population growth is located in 1991.

4 This allows for possible development in the Bishop's Stortford area (See Planning Area 15-Appendix E).

5 Part of the growth envisaged lies outside the South West Hampshire/Poole area in neighbouring Dorset.

TABLE 2: POPULATION CHANGE

NOTE: These figures are indicative only of the likely scale of change, and are related to the totals at the foot of the columns in Table 1.

(Thousands)

Area No.	Planning Districts (used for analytical purposes)	General Areas (not necessarily limited to the towns named)	1966-1981	1981-1991	1991-2001	1966-2001
1.	GREATER LONDON	GREATER LONDON	-489	-336	0	-825
2.	20, 21, 22, 24, 25 (PART) <sup>1</sup>	MEDWAY/NORTH WEST KENT	147	86	61	294
3.	23	SOUTH WEST KENT	25	20	15	60
4.	34	UCKFIELD	11	7	7	25
5.	30, 31, 32	EAST SURREY	37	4	0	41
6.	33	CRAWLEY/BURGESS HILL	48	120	70	238
7.	PART 40, 41 and PART 42 <sup>2</sup>	STAINES/GUILDFORD	112	38	15	165
8.	PART 40, PART 42, 43, <sup>2</sup> 50, 53	READING/WOKINGHAM/ ALDERSHOT/BASINGSTOKE	226	227	250	703
9.	54	CHILTERN	16	3	3	22
10.	51, 52	SLOUGH/CHESHAM	79	30	20	129
11.	55 (LESS BLETCHLEY) <sup>3</sup>	AYLESBURY	17	40	25	82
12.	60 and 61	SOUTH WEST HERTS	111	30	20	161
13.	65	LUTON	60	36	30	126
14.	62	HITCHIN/HATFIELD	74	45	20	139
15.	63, 64 <sup>4</sup>	EAST HERTS	64	45	110	219
16.	70, 71	WEST ESSEX	44	35	20	99
17.	72	CHELMSFORD	38	46	20	104
18.	73	SOUTH ESSEX	156	170	100	426
19.	26 PLUS PART 25 <sup>1</sup>	NORTH EAST KENT	31	25	25	81
20.	27, 28, 29	SOUTH EAST KENT	31	35	52	118
21.	39	EASTBOURNE/HASTINGS	71	50	40	161
22.	37, 38	SUSSEX COAST	63	14	10	87
23.	35, 36	SOUTH WEST SUSSEX	23	15	15	53
24.	47	SOUTH HANTS	160	220	200	580
25.	49	ISLE OF WIGHT	8	6	10	24
26.	48 <sup>5</sup>	S.W. HANTS/POOLE	60	60	50	170
27.	44, 45, 46	HANTS. DOWNS	67	16	20	103
28.	56	NEWBURY	26	15	15	56
29.	57, 58, 59	OXFORD	119	53	70	242
30.	66, 67, (PLUS BLETCHLEY) <sup>3</sup>	MILTON KEYNES	101	180	130	411
31.	68, 69	NORTH BEDS	55	19	35	109
32.	74, 75	NORTH WEST/MID-ESSEX	48	15	13	76
33.	76	N.E. ESSEX	59	30	30	119
	Total, South East Region		1,697	1,400	1,500	4,597

TABLE 3: POPULATION CHANGE

NOTE: These figures are indicative only, and relate to the figures in Table II

Area No.	Planning districts (used for analytical purposes)	General areas (not necessarily limited to the towns named)	1966-1981	1966-81 Annual* Average	1981-1991 Annual* Average	1991-2001 Annual* Average	1966-2001
1.	GREATER LONDON	GREATER LONDON	-6.2	-0.42	0.46	0	-10.5
2.	20, 21, 22, 24, 25 (PART) <sup>1</sup>	MEDWAY/ NORTH WEST KENT	22.5	1.50	1.08	0.69	45.0
3.	23	SOUTH WEST KENT	14.8	0.99	1.03	0.70	35.5
4.	34	UCKFIELD	22.9	1.53	1.19	1.06	52.1
5.	30, 31, 32	EAST SURREY	11.5	0.77	0.11	0	12.7
6.	33	CRAWLEY/ BURGESS HILL	21.1	1.41	4.36	1.77	104.9
7.	PART 40, 41 and <sup>2</sup>	STAINES/GUILDFORD	19.6	1.31	0.56	0.21	28.9
8.	PART 40, PART 42, 43, <sup>2</sup> 50,53	READING/WOKINGHAM/ ALDERSHOT/ BASINGSTOKE	45.4	3.03	3.14	2.63	141.2
9.	54	CHILTERN	22.2	1.48	0.34	0.33	30.6
10.	51, 52	SLOUGH/CHESHAM	16.4	1.09	0.53	0.34	26.7
11.	55 (LESS BLETCHLEY) <sup>3</sup>	AYLESBURY	21.3	1.41	4.12	1.82	102.5
12.	60 and 61	SOUTH WEST HERTS	24.7	1.64	0.54	0.34	35.9
13.	65	LUTON	25.0	1.67	1.20	0.89	52.5
14.	62	HITCHIN/HATFIELD	29.0	1.93	1.37	0.53	54.5
15.	63, 64 <sup>4</sup>	EAST HERTS	38.8	2.59	1.97	4.01	132.7
16.	70, 71	WEST ESSEX	23.4	1.56	1.51	0.75	52.7
17.	72	CHELMSFORD	32.8	2.18	2.99	1.00	89.7
18.	73	SOUTH ESSEX	26.5	1.77	2.28	1.11	72.4
19.	26	NORTH EAST KENT	10.6	0.71	0.77	0.72	27.6
20.	PLUS PART 25 <sup>1</sup>						
21.	27, 28, 29	SOUTH EAST KENT	14.6	0.97	1.48	1.86	55.9
22.	39	EASTBOURNE/ HASTINGS	27.7	1.85	1.53	1.06	62.9
23.	37, 38	SUSSEX COAST	12.0	0.80	0.24	0.17	16.5
24.	35, 36	SOUTH WEST SUSSEX	16.7	1.11	0.93	0.85	38.4
25.	47	SOUTH HANTS	19.1	1.28	2.21	1.61	69.4
26.	48 <sup>5</sup>	ISLE OF WIGHT	8.0	0.53	0.56	0.88	24.0
27.	44, 45, 46	S.W. HANTS/POOLE	16.6	1.10	1.42	1.04	47.0
28.	56	HANTS. DOWNS	35.8	2.39	0.63	0.74	55.1
29.	57, 58, 59	NEWBURY	47.3	3.15	1.85	1.56	101.9
30.	66, 67 (PLUS BLETCHLEY) <sup>3</sup>	OXFORD	27.7	1.84	0.97	1.16	56.4
31.	68, 69	MILTON KEYNES	124.7	8.31	9.89 <sup>3</sup>	3.69 <sup>3</sup>	525.9
32.	74, 75	NORTH BEDS	28.2	1.88	0.76	1.30	55.9
33.	76	NORTH WEST/ MID ESSEX	32.9	2.19	0.77	0.62	52.1
		N.E. ESSEX	26.5	1.76	1.06	0.96	53.4
Total, South East Region			10.0	0.67	0.75	0.75	27.1

\* Annual average is total change divided by the number of years.

## APPENDIX E

### PLANNING AREAS

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#### General

1. These notes set out the implications of the regional strategy for 33 planning areas within the region.
2. The boundaries of planning areas are shown in figure 37. Each area comprises one or more of the planning districts for which data was collected for use in the evaluation process. Where a planning area extends across local planning authority boundaries, preparation of a sub-regional appraisal for the whole area will require co-operative action by the local planning authorities concerned.
3. The notes should be read in conjunction with chapters 9 and 10 of the Report.
4. The sub-regional appraisals and subsequent preparation of structure plans will involve:—
  - (a) preliminary feasibility studies to establish the population capacity of each area, bearing in mind the indicative population figures given in Appendix D to this Report;
  - (b) appropriate land use/transportation studies and
  - (c) consideration of the detailed factors set out in this Report, and particularly in Chapters 9 and 10.
5. The notes are based on present knowledge and information. It is accepted that as circumstances change local planning authorities may need to take into account other factors as a basis for their structure plans.

#### Planning Area 1

##### GREATER LONDON

The Greater London Development Plan was submitted to the Minister of Housing and Local Government in August 1969. Without seeking to pre-judge the Minister's decision on the plan, the team has nevertheless had to make certain assumptions about, for example, the likely size of Greater London's population, but these generally relate to a later period than is covered by the Plan. These assumptions are set out in Chapter 10 and other relevant sections of the Report.

#### Planning Area 2

##### MEDWAY/NORTH WEST KENT

1. The conflicting factors that affect the future development of the Maidstone/Medway medium growth area, which has potential for developing relatively independently of London, are summarised in Chapter 9, and these will need to be re-assessed during the preparation of a structure plan. In the regional context, more growth than has been assumed in the strategy would be acceptable and desirable if it reduced journeys to work in Greater London, but it will be important to avoid de-

pendence on mobile manufacturing employment to sustain such growth, and the urban form should ensure that growth is consistent with enhancement of the environment.

2. There is scope for the development of deep-water port facilities in the Medway estuary; and the structure plan will need to ensure that the land adjacent to the deep water is safeguarded for development which requires such a location.
3. On the assumption that the capacity indicated in Appendix D is acceptable, the structure plan will need to make allowance for average growth rates of about 10,000 persons per year up to 1981 and for about 8,500–9,000 persons per year in the next decade, decreasing to about 6,000 persons per year in the last 10 years of the century.
4. The structure plan will need to make positive proposals for meeting the increasing demands for recreation and leisure pursuits in the area.
5. The Ashford area would be suitable for accelerated growth as the Maidstone/Medway area approaches its capacity later in the century (see Planning Area 20).

### Planning Area 3

#### SOUTH WEST KENT

1. The population in this part of Kent, which includes a sector of the Metropolitan Green Belt, is currently growing at about 1,600 persons per year. A continuation of growth at or slightly above this level to the end of the century would be appropriate in terms of the regional strategy.
2. The area seems suitable for upper occupation group housing, and such housing will almost certainly be occupied by commuters. This suggests that local employment growth, probably of offices, should be slightly more than would be required by the growth of population, so that commuting by other occupation groups may be reduced, in view of likely limitations on the capacity of the area's railway links to Central London.

### Planning Area 4

#### UCKFIELD

1. This predominantly rural area is likely to be growing by less than 1,000 persons per year to 1981. There are no strong reasons regionally for suggesting a different rate of growth during the rest of the century, primarily because there is unlikely to be a significant increase in local employment.
2. Sites will be needed to meet the continuing demand for houses for upper occupation groups working in London and there are likely to be pressures for housing arising from the expansion of employment opportunities in the Crawley/Gatwick area and possibly in South-west Kent. Positive planning for an expansion of recreation facilities will be appropriate.

### Planning Area 5

#### EAST SURREY

1. This is an area in which growth is constrained by the Metropolitan Green Belt which separates

development on the edge of London from the Horley/Gatwick/Crawley area. It would be appropriate if post-1981 growth were therefore minimised.

2. Growth up to 1981 could be about 2,500 persons per year and the capacity of the area in terms of the constraints listed above would thus be approached. If circumstances permit it might be preferable to phase development over a longer period so as to concentrate growth in the planning area to the south.

#### Planning Area 6

##### CRAWLEY/BURGESS HILL

1. This extensive area has been identified as having potential for substantial growth. The first factor, and the largest, is the expected continuation of employment growth at Crawley and expansion at Gatwick airport. The second factor is possible employment growth in the Brighton sub-region to the south. Development in the southern part of the planning area near Burgess Hill might contribute towards relieving pressure in the Sussex Coast planning area.

2. The major uncertainty is the future of Gatwick Airport. If a second runway is approved, the airport is likely to require a total labour force of 16,000 to 30,000 by about 1980, and further constraints will be imposed on the possible urban form.

3. Because of this likely growth of employment with its consequential urbanisation, a structure plan for the area is urgently required. A number of issues, including drainage difficulties and the effect of the airport and its noise shadow on the pattern of urban development, call for an early sub-regional appraisal, to indicate whether provision can be made for a total population of over 450,000 in this planning area by the end of the century. The scale of investment required to implement such growth will also need to be assessed.

4. The structure plan will need to show how flexibility in implementation can be achieved, particularly how variable rates of growth may be dealt with.

5. In the south of the sub-region, an assessment will need to be made of possible linkages which should be promoted or strengthened between Haywards Heath and Burgess Hill and the Brighton sub-region, including the amount of local employment which should be encouraged in the former (see Planning Area 22).

#### Planning Area 7

##### STAINES/GUILDFORD

1. The structure plan for this area will need to strike a balance between a number of conflicting considerations. The average rate of population growth up to 1981 is likely to be fairly high, at about 7,500 persons per year. Preparation of a structure plan will need to include an examination to assess whether capacity exists for growth at a rate of 4,000 persons per year in the 1980's and of 1,500 persons per year in the last decade of the century, and whether this growth rate is realistic.

2. In devising a pattern for development it will be necessary to consider:—

- (a) the need to reduce pressures, particularly for employment growth in the part of the area nearest to London, in view of the likely continuance of growth of employment at London (Heathrow) Airport;



- (b) the need for further local development without detriment to the historic towns centres of Guildford, Farnham and Godalming;
- (c) the need to maintain a clear break between development in this area and the major growth area to the west (Reading/Wokingham/Aldershot/Basingstoke);
- (d) the capacity of the adjoining major growth area to accommodate substantial employment growth, part of which, by transference from this planning area, would contribute to the reduction in pressure in the northern part of the area near London; and
- (e) the effects of noise from London (Heathrow) Airport on urban form in the area.

## Planning Area 8

### READING/WOKINGHAM/ALDERSHOT/BASINGSTOKE

1. This area has been identified as one of considerable growth potential, sufficiently close to Greater London to absorb and reduce pressures within the Greater London boundary and yet capable of becoming a major growth area with a high degree of self-containment.
2. It will be important to establish, by an early sub-regional appraisal, the possible capacity and opportunities of the area, so that a phased investment programme for the improvement of the infrastructure (including local distributor roads, and surface water and foul drainage) may be drawn up as a matter of urgency to alleviate present problems and to provide a basis for rapid further growth.
3. The appropriate urban form may well consist of a cluster of towns, some more closely related than others, perhaps in due course with a major new centre including offices, and with a wide range of cultural and community facilities. The future of defence lands in the area is however uncertain. It would clearly be undesirable if the urban form were largely determined by defence lands and in consequence failed to realise the full potential of the area unless it can be shown that retention of substantial parts of the area for defence purposes is essential in the national interest and that no suitable alternatives can be found.
4. Up to 1981 the average rate of growth is expected to be at least 15,000 persons per year. The structure plan should examine the possibility of providing for an increase on this figure after 1981 and the retention of a high growth rate throughout the 1980's and 1990's. In the longer term, a wide range of new employment opportunities, supplementing the present employment base, should assist in the creation of a largely self-contained city region, capable of satisfying the needs of a wide cross-section of the population.
5. Particular attention will need to be paid in the structure plan to the resolution of environmental conflicts and to ensuring that the area's recreational potential is appropriately developed.

## Planning Area 9

### CHILTERNs

Henley-on-Thames is the largest settlement in the predominantly rural area of high landscape value, embracing part of the Thames Valley and the Chilterns. The structure plan for the area should suggest positive measures to combine conservation and the enhancement of the natural environment with the provision of additional opportunities for recreation. Provision for only very limited population growth is envisaged.

## Planning Area 10

### SLOUGH/CHESHAM

1. Development of a Reading/Wokingham/Aldershot/Basingstoke city region is intended to absorb pressures from, and reduce pressures within, towns such as Slough and Maidenhead. Similarly, Milton Keynes should relieve pressures in the northern part of the area, eg in High Wycombe, Amersham and Chesham.
2. The structure plan should be drawn up on the assumption that these two major growth points will concentrate growth to the west and north-west of London and that development in the urbanized parts of this planning area after 1981 should be limited to serve local needs only.

## Planning Areas 11

### AYLESBURY

1. The population growth envisaged in this area in the 1980's is related to the expected growth over this period in the Milton Keynes/Northampton/Wellingborough area, which is in part intended to relieve pressures in areas to the south. Development in the Milton Keynes area should therefore have priority.
2. Should the Milton Keynes/Northampton/Wellingborough area prove able to take more population than is envisaged in the strategy, growth in this area might be correspondingly reduced (see also Planning Area 30).

## Planning Area 12

### SOUTH-WEST HERTFORDSHIRE

1. This is an area of labour shortage in the thriving north-west sector of the region, but with constraints on substantial growth imposed by the Metropolitan Green Belt in the south and the Chilterns in the north. Noise from Luton airport may influence urban form in the northern part of the area.
2. Population growth up to 1981 is likely to be at an average rate of about 7,500 per year, and it is envisaged that this will drop to 3,000 per year in the 1980's and to 2,000 per year subsequently. It will be necessary to establish whether these growth rates can be satisfactorily achieved or whether the remainder of the growth at present planned in the Green Belt communities might be more satisfactorily spread evenly over the entire period. Pressures for employment may be reduced by the movement of firms to the Milton Keynes area (see also Planning Areas 13 and 30).

## Planning Area 13

### LUTON

1. This is an area with some potential for employment growth and Luton itself has many of the attributes of large centre. There are, however, environmental and transport constraints which appear likely to inhibit growth of population within the area. The structure plan will need to assess these conflicting factors. The future of Luton airport will be particularly important. Large scale expansion could lead to increasing demands for labour in an area already under pressure. It will be important, in this respect, for structure plans of adjoining areas to be related to one another.

2. Growth in the planning area up to 1981 is expected to be about 4,000 persons per year, with a slightly lesser rate envisaged in the following decade and a rate of 3,000 per year in the last years of the century. The structure plan will need to consider whether capacity exists for this amount of growth and how much will be available to meet local employment demands, having regard to alternative employment opportunities in surrounding areas, and possible unused capacity on railway lines to London.

#### Planning Area 14

##### HITCHIN/HATFIELD

1. There is little or no potential for further development in the southern part of this area, which is within the Metropolitan Green Belt. The northern part, however, has a thriving employment base and offers possibilities for population growth (perhaps involving the immediately adjoining part of Planning Area 31).

2. Growth up to 1981 is likely to average about 5,000 persons per year. For the subsequent 10 years, the structure plan will need to examine the possibility of accommodating growth averaging slightly less than this and reducing in the last part of the century to growth of the order of 2,000 persons per year.

3. It would be in the regional interest for sites to be made available for some upper occupation group housing and these groups would be likely to travel by rail to London to work. In general, however, the present balance between population and employment should be retained. Excessive growth of employment therefore may have to be diverted, perhaps to Milton Keynes, if unacceptable pressures for more population growth are to be avoided.

4. The structure plan will also need to examine the relationship between this area and Luton, where employment growth particularly at the airport may exceed the capacity for local population growth and thus exert pressures over a wide area. Expansion of the airport would also influence the location and capacity of growth in the northern part of the area because of aircraft noise.

#### Planning Area 15

##### EAST HERTFORDSHIRE

1. Most of the northern part of this planning area is within a wide stretch of open country where countryside considerations indicate urban growth should be minimized. Development in the southern part is constrained by the Metropolitan Green Belt.

2. Growth up to 1981 is expected at a rate of about 4,000 persons per year. For the following ten years the structure plan will need to examine the possibility of a slightly higher rate of growth. Consideration should be given to up to half this growth being concentrated in the Bishop's Stortford area if this amount proves to be consistent with preservation of the historic town centre.

3. The plan should also indicate how development in the Bishop's Stortford and Harlow area (see Planning Area 16) might be related if this area were required to develop as a large urban concentration. Allowance for higher growth after 1991, perhaps at a rate of 10,000 persons per year, would, in fact, begin to change the character of the area completely, and is only contemplated in the following circumstances:—

- (a) if the capacity of the South Essex/Chelmsford corridor is eventually assessed as below 1.25 million (and the Stort Valley is consequently required to provide an outlet for the movement of employment over short distances from London);
- (b) if the population level in the metropolitan region outside London rises to the level assumed in the study, despite efforts to get wider dispersal; and
- (c) if other alternatives prove impracticable.

4. The form, location and extent of development in the area will need to take account of the present and future noise shadows of Stansted Airport.

#### Planning Area 16

##### WEST ESSEX

1. The rate of population growth in this area up to 1981 is expected to be about 3,000 persons per year. The boundaries of the Metropolitan Green Belt in the area should be examined in detail so that the inbuilt potential of Harlow may be fully realised, and a rate of about 3,500 persons per year might be appropriate in the 1980's
2. In devising an appropriate form for development in the area, account should be taken of two possibilities over the longer term. The first is that growth might be at a much reduced rate in the later part of the century. The second is that, in the event of failure to achieve the scale of growth envisaged in South Essex, it may be appropriate to develop the Stort Valley area substantially in the regional interest. In the latter event, Harlow may have to become part of a much larger urban complex (see also East Hertfordshire Planning Area 15 where the pre-conditions for substantial growth are fully set out).
3. The location, nature, and scale of growth must have regard to the effects of existing and possible future growth at Stansted Airport (see also Planning Area 32).

#### Planning Area 17

##### CHELMSFORD

1. The existing employment base has considerable potential for growth. The structure plan will need to determine the manner in which use can be made of this potential without detriment to the character of the town bearing in mind that a population increase of about 2,500 persons per year is expected up to 1981.
2. The possible growth rate envisaged for the following ten years is almost twice as high but might be located in the southern part of the planning area and closely related to development in South Essex. Even though development in the two areas may not be entirely interdependent, structure plans for the two should be considered together (see South Essex Planning Area 18).

#### Planning Area 18

##### SOUTH ESSEX

1. This extensive and complex area presents a number of regionally important planning problems—an inadequate local employment base, with as a result, heavy journey-to-work flows into

London; a poor urban structure in parts and a generally inadequate infrastructure (particularly roads); social problems along Thameside; and environmental and recreational deficiencies.

2. Nevertheless the area offers substantial opportunities for development.
  - (a) Its inner part is close to London with which it traditionally has social ties and may provide scope for the relief of the social problems of Inner London.
  - (b) The central part of the area is near enough to London to receive mobile employment which is only prepared to move a limited distance from London. Expansion of the local employment base would also keep to reduce pressures on transport links across the Greater London boundary.
  - (c) Development in the Southend area would serve to strengthen its self-containment.
  - (d) At the same time regional highway improvements, particularly a good road connection to the M1 and a new crossing of the Thames, should reduce South Essex's present dependence on London.
3. The structure plan will need to show as a matter of urgency how positive action at the local level can be taken to provide suitable conditions for the attraction of new industrial and office employment and so rapidly broaden the employment base. It will also need to show how the entire area may be restructured. This need not take the form of linear urbanization. It might take the form of clusters of towns separated by land used for recreational purposes. The plan will further need to relate the phasing of investment on infrastructure to the phasing of growth.
4. The capacity of the area for population growth should be assessed in conjunction as necessary with the Chelmsford area. Up to 1981 the South Essex planning district is expected to grow at an average of about 11,000 persons per year. From that date the strategy envisages a substantial increase to about 16,000 persons per year, dropping to about 10,000 per year in the 1990's. A higher rate still would be acceptable and even desirable if it could be achieved without detriment to environmental standards and without urban form problems, either within the area or in the parts of London related to it. Any contribution South Essex might make to the solution of Inner London's social problems will need to be considered together with the Greater London Council.

## Planning Area 19

### NORTH EAST KENT

1. Unlike most parts of the region, this area at present has employment difficulties. There are the problems of seasonal employment in the coastal resort towns; of a declining coalfield; and of an insufficiently diverse employment base. Canterbury has however developed a momentum for growth which may, unless special care is taken exert undesirable pressure on the historic city centre.
2. Some new employment will be needed to sustain an adequate level of activity although it is thought unlikely that the area will be particularly attractive for mobile employment. The structure plan should therefore seek to promote local employment growth so far as possible. There are already substantial planning commitments for development and these will need to be considered in relation to long term prospects. An average population growth of 2,000 to 2,500 persons per year seems likely.
3. The structure plan will need to examine comprehensively the future of the holiday resorts and of recreation generally in the area.

## Planning Area 20

### SOUTH EAST KENT

1. The future of this area and particularly of Dover and Folkestone will remain uncertain until a decision on the Channel Tunnel is taken.
2. Accelerated growth probably at or near Ashford may be required as the development in the Maidstone/Medway area approaches its capacity; and opportunities for expansion in the Ashford area should be provided for in the structure plan. Up to 1981 an average growth rate of just over 2,000 persons per year is suggested, followed by an increase to almost 4,000 per year in the 1980's and to over 5,000 per year for the remainder of the century (see also Maidstone/Medway Planning Area 2).
3. The structure plan will need to examine the possibilities for developing the area's recreational and tourist potential.

## Planning Area 21

### EASTBOURNE/HASTINGS

1. These two large towns, with Bexhill, Rye, and the surrounding rural area, are largely self-contained, but without a very populous hinterland.
2. The structure plan will need to make provision for a moderate rate of growth of population in the area which could assist in achieving a better balance in the area's age structure, and in particular there will need to be some inward movement of employment related to any approved Town Development Act scheme. On the assumption that the scheme at Hastings does go ahead, the average rate of growth is likely to be about 4,000 persons per year up to 1981. A similar or slightly higher rate for the rest of the century would be acceptable.
3. The structure plan will also need to examine the problems of urban renewal and the possibilities for satisfying increasing demands for holidays and recreation generally in the area.

## Planning Area 22

### SUSSEX COAST

1. The coastal resorts from Bognor Regis to Seaford are not likely to be able to expand to a significant extent after 1981 owing to the constraints imposed by the South Downs.
2. However pressures on Brighton, as an important sub-regional shopping, commercial (mainly office) and university centre, are likely to remain heavy and the structure plan will need to consider the possibility of linkages with the Burgess Hill/Haywards Heath area to the north. In the event of employment showing signs of excessive growth, attempts may need to be made to secure mobility westwards to South Hampshire. The Eastbourne/Hastings area may also serve as an outlet.
3. The structure plan will need to examine comprehensively the future of the holiday and leisure facilities along this important stretch of coast.



### SOUTH WEST SUSSEX

1. This is a sensitive countryside area in which pressures may be exerted from several directions. To the west is South Hampshire, to the east Crawley and to the south east the coastal towns, where growth is constrained by the South Downs.
2. The structure plan will need to suggest how an average growth rate of about 1,500 persons per year may be accommodated without detriment to the character of Chichester and district, and also how the area may make a positive contribution to the recreational and leisure needs of the nearby growth areas and of London.

### Planning Area 24

### SOUTH HAMPSHIRE

1. The three local planning authorities concerned with this area have already set up a Joint Advisory Committee, and have designated special staff for the purpose of preparing a structure plan. Work on the structure plan is well advanced and there has been regular liaison with the team, particularly on questions of growth rates. The proposals of the Advisory Committee are compatible with the strategy and these comments are therefore primarily designed to set the regional context for the structure plan.
2. The regional study has confirmed the conclusions of previous studies. South Hampshire is potentially the core of a largely self-contained city region, with a substantial existing employment base and good employment growth prospects and a number of other attributes favourable to future rapid and successful growth. Growth in this area is particularly desirable since local employment growth momentum is great enough to exert proportionately only relatively small demands on mobile employment, particularly the limited amount capable of moving over long distances within the region.
3. There will however be need for heavy investment on the infrastructure, particularly on roads and for foul drainage. Much of this investment will be needed even at present growth rates. The impetus for growth appears to be sufficient to warrant an urgent decision on the required infrastructure so that the works, which will take some years to design and carry out, will not inhibit a progressive build-up to a higher rate of growth should this continue to seem necessary through the 1980's and thereafter.
4. By that time improvements to the national highway network, in particular completion of the M.3, and the A.3 link, the M.27 South Coast motorway and major works on the A.34 to the Midlands, will have improved the city region's accessibility from most parts of the country. There are nevertheless problems of long-term transport capacity in the area, in view of the physical constraints.

### Planning Area 25

### ISLE OF WIGHT

1. There are no compelling reasons in regional terms for more than a slow rate of growth throughout the remainder of this century, averaging less than 1,000 persons per year. The extent, rate and location of future growth will need to be decided in the light of the following considerations:—
  - (a) the growth and prosperity of the nearby South Hampshire city region, which may result in increased pressures for housing on the island;
  - (b) recreational pressures;

- (c) the desirability of attracting employment to the island;
- (d) further demands for retirement or second homes;
- (e) the capacity of the island to accept more growth without unacceptable impact on the environment; and
- (f) the nature, cost, frequency and reliability of transport links with the mainland.

#### Planning Area 26

##### SOUTH WEST HAMPSHIRE/POOLE

1. This area has a thriving employment base with considerable potential for growth. There do not appear to be any difficulties which would prevent the continuation of the current growth rate of about 4,000 persons per year up to 1981, subsequently increasing by as much as 50% during the remainder of the century. In accord with the present long-term policies of the local planning authorities, the structure plan (which might also include land in neighbouring Dorset) should allow for this rate to be increased during the remainder of the century by at least 50% should the need arise from a continuing high growth rate in the region coupled with any failure to achieve appropriate levels in South Hampshire.
2. The structure plan will also need to take particular account of the transport links with South Hampshire, and offer solutions to the increased local and national pressures likely to be exerted on the New Forest and the coastline from a growing demand for recreation.

#### Planning Area 27

##### HAMPSHIRE DOWNS

1. This planning area is structurally important for the south-western part of the region, separating the main growth areas, South Hampshire and Reading/Wokingham/Aldershot/Basingstoke.
2. The structure plan for the area will need to recognise this important role and also the need to conserve wide areas of unspoilt countryside and attractive small towns and villages. The pressures likely to arise from large concentrations of people seeking recreation in the open air will need to be provided for in the context of the other important natural resources of the area. Studies are already in hand. Only relatively small amounts of growth are proposed in the years after 1981.

#### Planning Area 28

##### NEWBURY AREA

1. This relatively small area is strategically located at a junction in the main regional and inter-regional transport network and is readily accessible from all directions. To the east and south east there is a proposed major growth area with a wide variety of employment opportunities. Good employment opportunities are also likely to be available in the Oxford sub-region to the north, particularly in scientific and research establishments.
2. The structure plan, in making provision for growth at an average rate of about 1,500 persons per year up to the end of the century, will need to provide an urban form within which these numbers can be accommodated without serious detriment to the character of the present urban areas and to the high quality environment in the area generally.

## OXFORD

1. In the regional context the main objective is the conservation of the character of Oxford itself. The area is relatively self-contained and continuing development is seen as part of the normal growth of the region. There are no suggestions for any special change of the growth rate either up or down.
2. The average population growth rate up to 1981 is expected to be about 8,000 persons per year, mostly in the smaller towns within the area; and only minimal growth in or near to Oxford is expected. The structure plan will need to demonstrate how the great employment potential within Oxford itself and other towns of outstanding character such as Banbury and Abingdon can be fully realised without detriment to the character of the towns and without damage to the Cotswolds, the Chilterns, the Berkshire Downs, and other areas of high quality countryside. In seeking the most appropriate future pattern of development, a growth rate of about 5,000 per year in the 1980's and about 7,000 per year in the last decade of the century should be considered.

## MILTON KEYNES/NORTHAMPTON

1. This area of North Buckinghamshire, extending over the regional boundary into Northamptonshire, has been assessed as an area of potential for substantial growth; and in due course is expected to develop as an important self-contained city region. There are large Government commitments for rapid growth in Milton Keynes, Northampton and Wellingborough, involving substantial population intake from London and Buckinghamshire, and implying preferential steering of mobile employment to the area.
2. An unpublished sub-regional study has suggested possible ways of securing a closer integration of the three parts of the growth area to facilitate further expansion. Since this is in accord with the regional strategy, it will need to be further explored in the light of the findings of this Report. The future growth of Bedford in relation to this integrated area will need to be established (see Planning Area 31).
3. The structure plan will need to indicate the most appropriate pattern of development for a high growth rate over a longer period than has previously been considered, and the resources necessary to provide the widespread recreational and leisure facilities that will be needed in the area.

## NORTH BEDFORDSHIRE

1. In regional terms this is primarily an extensive area of countryside in which agricultural and other countryside objectives should take precedence over urban development. Nevertheless there is some inbuilt momentum for growth in Bedford, due to employment opportunities and transport potential, particularly road connections to Luton and the Milton Keynes/Northampton area, and spare rail capacity to London.
2. In putting forward a solution to this conflict, the structure plan will need to have regard to long-term development in the Milton Keynes/Northampton/Wellingborough city region (Planning Area 30) which previous studies have suggested would draw Bedford within its ambit, and to the possibility

of accommodating some of the population growth required by Luton's large employment potential. Regard should also be paid to the growth of the towns in Planning Area 14 whose growth may spread into the extreme edge of this area.

3. Population growth up to 1981 averaging about 3,500 persons per year might drop to less than 2,000 persons per year in the next decade, in view of the importance of achieving countryside objectives in the area. A growth of 3,500 persons per year may however be appropriate in the last decade of the century as the large scale developments in the surrounding areas exert their influence.

#### Planning Area 32

#### NORTH WEST/MID-ESSEX

1. This area is likely to be under pressure to meet leisure and recreational deficiencies near to London and which will increasingly be exerted by growth in South Essex. Nevertheless some urban growth will be required to meet local needs, to serve the needs of employment in Chelmsford and particularly in the north-western part of the area, to provide homes for people prepared to travel long distances to work.

2. The structure plan will need to take into account the future of Stansted airport, and the effects of aircraft noise on this and adjoining areas. Pressures may also arise from the growth of Bishop's Stortford and Harlow which may be required in the later part of the century should implementation of the strategy not be entirely successful in South Essex.

#### Planning Area 33

#### NORTH EAST ESSEX

1. Over-emphasis on growth in this area would conflict with agricultural and countryside objectives generally and would be at variance with regional policies should it be dependent on the inward movement of mobile employment.

2. Pressures arising from the growing university at Colchester, which is also a garrison town and important service centre, from the port of Harwich and from the attractions of the retirement and holiday resorts along the coast, should be met by an average growth rate of about 4,000 persons per year up to 1981. A reduction to about three quarters of that rate for the remainder of the century is suggested. Problems of urban form will be posed by the need to ease pressures on the historic centre of Colchester, to avoid undue conflict with countryside objectives, to allow for the growth of indigenous employment and to satisfy the increasing demand for holiday and leisure pursuits.

# STRATEGIC PLAN FOR

## THE SOUTH EAST

Report by the South East Joint Planning Team



London  
26-28 Old Queen Street  
1970

Prepared and designed by the South East Joint Planning Team  
Maps and diagrams prepared by the South East Joint Planning Team  
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## PREFACE

1. This Report on a study of South East England is designed to provide a strategic framework for the longer-term development of the region.
2. The study was commissioned in 1968 by the Government, the Standing Conference on London and South East Regional Planning, representing the local planning authorities, and the South East Economic Planning Council. It was carried out by a multi-professional team provided jointly by Government Departments, local planning authorities and the Planning Council, and headed by Dr Wilfred Burns, Chief Planner of the Ministry of Housing and Local Government. The study was conducted under the aegis of a steering group of senior officials from the Government Departments concerned, the Standing Conference and the Planning Council.
3. There are now over 17 million people living in the South East. By the end of the century there may be four or five millions more and the pressures on the environment, already formidable, are bound to increase. The Report seeks to deal with this prospect, not by recommending a rigid master plan for the region—but by outlining a flexible framework within which the local planning authorities could prepare their structure plans and carry out their planning responsibilities and within which public investment and other policies in the region over the years ahead could be considered.
4. No decisions have yet been taken on the team's recommendations for the future regional strategy. The Report is now published to allow an opportunity for consultation and discussion with interested parties. The Commissioning Bodies however regard it as a significant and valuable contribution to the future planning of the region and they commend it to the consideration of all concerned.

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